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IN THE

Supreme Court of the United States

OCTOBER TERM, 1967.

No. 395

MOTOROLA, INC.,

Petitioner,

vs.

ESTHER MARION ARMSTRONG, EXECUTRIX,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

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Motorola, Inc., prays that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Seventh Circuit entered in the above case on February 6, 1967, as such judgment pertains to the enforceability of U. S. patents No. 1,941,069, and Reissue No. 21,660, two of the three patents in suit.

OPINIONS BELOW.

The opinion of the Court of Appeals and judgment are printed in Appendix A herewith, and reported in 374 F. 2d 764.[1] The Findings of Fact (42 pages), Conclusions of Law and Memorandum are reported in 230 F. Supp. 337, and the latter two portions are printed in Appendix B herewith.

JURISDICTION.

The judgment of the Court of Appeals was entered February 6, 1967. A timely filed petition for rehearing was denied on March 22, 1967. On June 12, 1967, Mr. Justice Clark granted an extension of time to July 20, 1967 within which to file this petition. Jurisdiction of this Court is invoked under 28 U. S. C., Section 1254(1).

QUESTIONS PRESENTED.

1. Whether a patent monopoly granted to cover a two-element combination may be used to control each unpatented separate element of that combination by separately licensing, and collecting royalties on, the manufacture, use, and sale of each element.

2. Whether, under the provisions of the patent law relating to the reissuance of defective patents (now 35 U. S. C. § 251), a patent claiming a combination of two elements can validly be reissued to include for the first time claims to one element only of that combination.

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1. The printed record prepared for the Court of Appeals as the Appendix to Defendant-Appellant's brief contains the pleadings and judgment, the printed transcript of testimony and certain documentary exhibits, comprises Volumes I to VI which are paged consecutively and will be cited here by page number as (A. ....), and a single printed volume as the Appendix to Plaintiff-Appellee's brief. A certified copy of such record is filed in this Court with the present Petition.

3. Whether the use of one unpatented element of a patented two-element combination and the unpatentable result of the other element, but not the other element itself, constitutes an infringing "use" of that combination within the meaning of 35 U. S. C. § 271(a).

STATUTES INVOLVED.

The pertinent statutes are 35 U. S. C. §§ 112, 251 and their respective predecessor statutes § 33, and § 64, and 35 U. S. C. § 271(a), which are each printed in Appendix C.

STATEMENT OF THE CASE.

Edwin H. Armstrong, the original plaintiff here, was the holder of numerous patents dealing with frequency modulation in radio, or as it is familiarly called, FM.[2] These patents pertained to FM transmitters, FM receivers, and FM systems comprised of combinations of two elements, the transmitter and the receiver.

The petitioner here, Motorola, Inc., is a manufacturer of electronic products including FM radio and television receiving sets. (Television sound is FM radio.) *Motorola does not manufacture or sell FM radio broadcast or television transmitters, and it does not engage in FM radio or TV broadcasting.*

Motorola was licensed under the first-filed Armstrong patent on FM receivers, No. 1,941,447.[3] However, it refused

2. Armstrong was not the inventor of FM, and of his FM patents, his first one, No. 1,941,447 was filed in the Patent Office in May 1927, and issued by Armstrong on December 26, 1933, the same day as two of three patents in suit here.

3. The following four patents issued to Armstrong all on December 26, 1933 to the claimed subjects indicated:

Patent No.	*Filed*	*Claimed Subject Matter*
1,941,447	May 18, 1927	FM receivers
1,941,066	July 30, 1930	Detector for FM receivers
1,941,068	Jan. 24, 1933	FM transmitter
1,941,069	Jan. 24, 1933	Combination of FM transmitter and FM receiver

to take licenses under the other Armstrong patents, including those which are the subject of the present suit, believing it was neither a direct nor a contributory infringer.

Armstrong[4] brought this action against Motorola on January 6, 1954 for infringement of five FM patents. The complaint was dismissed with prejudice as to two of the five, which each claimed a transmitter. The remaining three were found valid and infringed. Of these, No. 1,941,066 relates to a detector for a receiver, and certiorari is not sought with respect to the decisions below pertaining to this patent.

This petition, therefore, relates only to the decision of the court below with respect to two patents, No. 1,941,069, which we will hereinafter refer to as patent '069, and Reissue No. 21,660, which we will refer to as reissue '660.

THE INFRINGEMENT RULING.

Specifically, Motorola was found to have infringed claims 1 and 2 of each of the above two patents, and also claims 4 and 6 of the reissue '660 patent. Claims 1 and 2 in both patents are combination claims on systems comprising a transmitter as one element and a receiver as the other element. The invention here, as in all combination patent claims, lies in forming the combination from elements that are unpatented, insofar as the combination claims themselves are concerned. The said claims 4 and 6, obtained in the reissued patent cover the receiver element only. A more detailed analysis of the specific claims is made in Appendix D of this petition.

Armstrong claimed, and the courts below held, that Motorola directly infringed all four combination claims

4. Armstrong died February 1, 1954, and his widow, as Executrix under his will, was substituted by orders entered in the District Court in March and in April 1955.

when it tested its FM receivers by tuning them to an Armstrong-licensed transmitter. Motorola contended that this testing did not practice the invention because Motorola used only one element of the combination, the receiver, and not the other, the transmitter. The Court of Appeals disagreed on the theory that, when Motorola thus used the licensed FM radio waves produced by a commercial broadcaster by tuning a receiver to a licensed transmitter this was the same as if Motorola itself was operating the transmitter. (App. A, p. 13a, *infra.*)

The Court of Appeals stated that the Motorola FM receivers were especially adapted for use in the Armstrong system, and having held Motorola to be a direct infringer by testing its receivers by tuning them to FM signals and listening to the signals, Motorola "became a contributory infringer by selling its receivers to unlicensed listeners of FM broadcasts". (App. A, p. 14a, *infra.*)

Because this ruling that Motorola was a contributory infringer is necessarily in error if the Court of Appeals erred in holding that Motorola and users of its receivers were direct infringers, it requires no separate discussion. We, therefore, lay the contributory infringement question to one side insofar as this petition for certiorari is concerned, contending that because there was no direct infringement, there could be no contributory infringement, under the principles stated in *Aro Mfg. Co.* v. *Convertible Top Replacement Co.* (ARO I), 365 U. S. 336, 341.

THE LICENSING SCHEME.

Armstrong exploited his FM patents, including the two which are pertinent here, by basically three forms of licenses. One sanctioned their use in two-way communication systems. Petitioner does not challenge these licenses. Another form was issued to FM transmitting stations, and

the third was issued to manufacturers of FM receivers, such as Motorola. No licenses were issued to members of the general public who purchased and operated FM receivers, whether radio or television receivers.

Armstrong licenses to FM transmitting stations, during the period of the alleged infringement by Motorola, restricted the grant to use the inventions as follows (A3503):

> "No license is granted for reception other than that involved in monitoring the operations of a broadcast transmitter."

During the same period, Armstrong's FM receiver manufacturing licenses granted licensees only the right to make and sell receivers for "broadcast reception." (A3528.)

Hence, the terms of both the transmitter licenses and the receiver-manufacturer licenses expressly withheld from licensees any right to use the inventions of the combination claims in issue here in normal commercial FM transmission and receiving operations.[5] The broadcaster was licensed only under the transmitter element of the combination claims and the manufacturer of receivers was licensed only under the receiver element of those claims, neither element being within the patent monopoly.

By this licensing scheme, Armstrong effectively converted each of his combination claims into two new claims, one on each of the unpatented elements. This do-it-yourself enlargement of his patent monopoly to cover each element of the combination claims enabled him to impose double royalties under each such claim, first upon his broadcast-transmitter licensees, and again upon his receiver-manufacturer licensees.

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5. The transmitter and the receiver-manufacturer licenses permitted licensees to use these combinations only in their own internal operations. Transmitter licensees were licensed to monitor their own broadcasts, and the receiver-manufacturer licensees were authorized to transmit to themselves for testing and design purposes.

Motorola claimed in the courts below that Armstrong's licensing systems which licensed only an element of the combination claims but never the entire combination comprising his invention, was a scheme to multiply sources for royalties by private contract which was a patent misuse extending the patent monopoly beyond its grant and rendering the patents unenforceable. The Court of Appeals disagreed. (App. A, pp. 16a, 17a, *infra*.)

THE REISSUE PATENT.

Motorola contended that reissue patent '660 was invalid because its one-element claims 4 and 6 on receivers were not for the "same invention" as the two-element combinations of transmitters and receivers which comprised all of the claims of the original patent 2,215,284. (A2959-77.) When Armstrong reissued that patent for the one here in suit (A3401-10) he included new claims 4 and 6 which *omitted* the transmitter structure in one of such claims and the steps of generating and transmitting a radio wave in the other of such claims. These new claims thus covered *only the receiver element* whereas the original patent covered only combinations of receivers and transmitters.

For ease of reference, claims 1 and 2 of the reissue patent have been broken down, in Appendix D, into the preamble and the two combination elements, the latter noted as portions (a) and (b). The one-element receiver claims 4 and 6 are compared with the two-element combination claims 2 and 1, respectively. (App. D, pp. 28a-30a, *infra*.)

The comparison shows, in claims 1 and 6 for instance, that claim 1 is directed to the "method of transmitting and reproducing," while claim 6 is to the "method of reproducing" only. The steps for generating and transmitting the wave are italicized in claim 1 portion (a). In the preamble of claim 6, no such steps are claimed, but only the

wave resulting from them. The claimed subject matter or steps in claim 6 are also italicized, but these only describe reproducing or receiving operations.[6] Obviously, therefore, the practice of element (a) in each of the combination claims 1 and 2 would take place at a broadcasting station, and that of element (b) would take place at the receiver in tuning to and reproducing a radio wave or signal from a broadcasting station, just as in one's home.

REASONS FOR GRANTING THE WRIT.

For many years this Court has zealously guarded the public from the heavy economic burden of royalties imposed by improvidently granted patents, including reissues, and illegal extensions of patent rights by misuse of the patent grant. But the ingenuity of those who seek to enrich themselves to the detriment of the public economy continues to bear fruit, and new schemes are constantly being devised to evade the well-settled principle that a patent monopoly is limited to the scope of its grant.

In deciding the instant case, the courts below have given approval to an ingenious scheme which enables a patentee of a combination of unpatented elements, in effect, to transform his patent into separate patents on each of the elements of the combination and thus to extort a separate royalty on each element.

It is this multiple royalty scheme, treating unpatented separate elements as if they were themselves patented, now sanctioned by the courts below, which gives rise to each of the foregoing questions posed by this petition and which makes the grant of certiorari most appropriate.

In each of the two patents to which this petition is ad-

6. Claim 4 is similarly treated in Appendix D. The two claims of the broadcasting system patent '069 are similarly broken down in Appendix D, p. 28a, *infra*.

dressed, Armstrong obtained from the Patent Office exclusive rights to a two-element combination, a transmitter and a receiver of FM signals. He then proceeded to convert each of these monopolies into two new monopolies—a transmitter monopoly and a receiver monopoly.

This conversion, condoned below, involved the following manipulative steps:

1. Granting licenses restricting the licensee to one of the unpatented elements of the claimed combination and expressly withholding any rights under the other element.

2. Adding to one of the two patents here involved, by illegal reissue procedure, claims addressed to the receiver element only.

3. Asserting the combination claims of both patents against the manufacture of the receiver element only, and securing from the courts below a monopoly of this element of the combination.

Each of these steps has been approved by the Seventh Circuit Court of Appeals in direct contravention of long established principles enunciated by this Court.

1. The Seventh Circuit's Approval of a Monopoly in Unpatented Elements of a Patented Combination Claim Is a Direct Conflict With the Decisions of This Court.

The court below approved the Armstrong licensing scheme, whereby Armstrong granted licenses under the two combination patents but restricted their use so that (a) the broadcaster licensee had rights only under the unpatented transmitter element of the combination claims, and (b) the receiver manufacturer licensee had rights only under the unpatented receiver element of the combination claims. No rights were granted for normal commercial use of the combination claims of the patented complete broadcasting system. Armstrong thus received royalties

from the operation of the transmitters alone, and again from the sale of the receivers alone.

The Seventh Circuit's approval of that scheme is in *direct conflict* with the principles enunciated in the two *Mercoid* cases, *Mercoid* v. *Mid-Continent Investment*, 320 U. S. 661, and *Mercoid* v. *Minneapolis-Honeywell*, 320 U. S. 680, and related cases.[7]

In *Mercoid Corp.* v. *Mid-Continent, supra*, the patent was one of combination claims covering a domestic heating system, of which an element was an unpatented switch. Neither the patent owner Mid-Continent, nor Minneapolis-Honeywell, its licensee, manufactured or installed the system, but they used the license agreements to prevent the sale of the switches in the heating systems unless made by and purchased from a licensee. Royalty payments under the licenses were based upon the sale of the switches. Mercoid manufactured and sold switches to go into the patented heating system, and was sued for contributory patent infringement. This Court at page 665 referred to its earlier decisions and stated, "In those cases both direct and contributory infringement suits were disallowed on a showing that the owner of the patent was using it 'as the effective means of restraining competition with its sale of an unpatented article.' . . . It is true that those cases involved the use of the patent for a machine or process to secure a partial monopoly in supplies consumed in its operation or unpatented materials employed in it. But we can see no difference in principle where the unpatented material or device is itself an integral part of the structure embodying the patent."

Here, Armstrong sued for direct instead of contributory

7. If the court below was relying on *General Talking Pictures* v. *Western Electric*, 304 U. S. 175, 305 U. S. 124, the reliance was misplaced. This Court said (304 U. S. at 181), "There is here no attempt on the part of the patent owner to extend the scope of the monopoly beyond that contemplated by the patent statute."

infringement, but the form of suit can make no difference in the application of the principle that patents shall not be misused to restrain competition in the sale of unpatented articles. When Armstrong licensed his two system patents, he restricted the rights granted to each of the two "suppliers," so to speak, of the two products necessary to provide the entire system so that both "suppliers" had to take a license for each unpatented part or element of the system, or suffer the possibility of a patent infringement suit based on the system patents. The licensing practice struck down in the *Mercoid* Cases, *supra*, is the basis of the licensing situation which has now been approved by the court below. But, Armstrong enlarged on the scheme of the *Mercoid* Cases, *supra*. He expanded the scheme from one to two elements of the system and thus collected double royalties for a single invention while suppressing competition in the manufacture, use, and sale of FM transmitters and receivers which were each unpatented.

As this Court said in *Mercoid*, sanctioning the expansion of a system patent monopoly to control the manufacture and sale of an unpatented element of the system would permit private business to function (320 U. S. at p. 667) "as its own patent office and impose its own law upon its licensees. It would obtain by contract what letters patent alone may grant. * * * (and) We now add that it makes no difference that the unpatented device is part of the patented whole."

And this Court held at page 684 of 320 U. S., that "a patent on a combination is a patent on the assembled or functioning whole, not on the separate parts. * * * (and) * * * respondent may not obtain from a court of equity any decree which directly or indirectly helps it to subvert the public policy which underlies the grant of its patent."

The Seventh Circuit's failure either to acknowledge the existence of the *Mercoid* decisions or to apply the *Mercoid*

principles here, wholly justifies the invocation of this Court's review powers.

Moreover, these principles in *Mercoid* have been reiterated in *Aro Manufacturing Co.* v. *Convertible Top Replacement Co.*, 365 U. S. 336 (ARO I). Although respondent contended below that ARO I concerned repair and replacement and had no bearing on the present case, and the Court of Appeals failed to even acknowledge the existence of the decision, this Court made it very clear in ARO I that fundamental principles of patent law were involved which, we submit, emphasize the deep conflict between decisions of this Court and that of the Court of Appeals in the present case.

This Court stated in ARO I at page 338, "The principal, and we think the determinative, question presented here is whether the owner of a combination patent, comprised entirely of unpatented elements, has a patent monopoly on the manufacture, sale or use of the several unpatented components of the patented combination." (This same question is fundamental to the present case.) After this Court referred to the fact that the patentees in ARO never claimed the element of the fabric,[8] this Court held (p. 339) that "the claims made in the patent are the sole measure of the grant," and pointed to *Mercoid* v. *Mid-Continent*, *supra*. There, this Court had ruled (p. 667 of 320 U. S.), "The patent is for a combination only. Since none of the separate elements of the combination is claimed as the

8. It is significant that Armstrong described and claimed the patented invention wholly as a complete broadcasting system in the broadcasting '069 patent, and pointed out in the specification (A3387-8) that the *transmitter* was similar in principle and operation to that in his patent 1,941,068 (A3391) except that a wider swing in the signal was employed in the patent here, and that the *receiver* operated with the same general method regarding the signal as did the receiver in his prior patent 1,941,447 (A3173), except that there was a difference in the selective system. As we have pointed out herein, Motorola's receivers here in suit were all licensed under this '447 patent.

invention, none of them when dealt with separately is protected by the patent monopoly." Or, as Mr. Justice Black put it in his concurring opinion in ARO I (365 U. S. at 358), "It has long been settled with respect to combination patents that the monopoly rights extend only to the patented combination as a whole and that the public is free to appropriate any unpatented part of it 'however important.'"

If Armstrong had licensed FM broadcasters to use the four combination claims for normal commercial use (without the restriction against receiving), the FM listening public, including Motorola, would have been implicitly licensed to receive these broadcasts, and Armstrong could not have collected additional royalties from receiver manufacturers on the theory that they were either direct or contributory infringers. The Court of Appeals recognized this when it discussed Motorola's testing of receivers by listening to licensed broadcasts. The Court said (App. A, p. 13a *infra*):

> "But if the listening is unauthorized, then the use of the Motorola receivers infringes the combination patent. *Here Armstrong's transmitter licenses granted no license for reception (except for monitoring by the licensee).* Therefore it follows . . . that Motorola's testing of its receiver by unlicensed listening to the FM broadcasts constituted direct infringement." (Emphasis supplied.)

The Court of Appeals thus held, in effect, that the skill of legal counsel in manipulating concepts of the licensing of patent rights overcame the public policy of confining patent monopolies to the scope of their claims. Such a holding is as much in conflict with the principles laid down by this Court as was the lower court's opinion in *United States* v. *Masonite*, 316 U. S. 265, which, in effect, held that the skill of legal counsel in manipulating the concepts of "sale" and "agency" had overcome the significance of the

business practices in terms of restraint of trade (Cf. this Court's statement at p. 280 of 316 U. S.)

As this Court said in the *Mercoid* cases (p. 666 of 320 U. S.) in a statement applicable here:

> "The necessities or convenience of the patentee do not justify any use of the monopoly of the patent to create another monopoly. * * * The method by which the monopoly is sought to be extended is immaterial. * * * The instant case is a graphic illustration of the evils of an expansion of the patent monopoly by private engagements. * * * The struggle is not over a combination patent and the right to make or vend it. The contest is solely over unpatented wares which go into the patented product."

The decision of the Court of Appeals has created an unfortunate conflict with the decisions of this Court, and has opened the floodgate, such that we may reasonably expect that many owners of multi-element combination patents, unable to prove actual damages but permitted under the patent law (35 U. S. C. § 284) to seek an award "in no event less than a reasonable royalty" for the alleged use, manufacture or sale, will attempt to copy Armstrong's licensing scheme and enlarge their profits by asserting such patents against each supplier of a separate element of the claimed combination. Unless and until the legality of the Armstrong scheme is resolved by this Court, we may expect increased patent litigation on this issue. Suppliers in many fields of commercial activity, unwilling to accept this newly approved scheme for multiplying royalties by license grants outside the scope of a combination patent monopoly until this Court has spoken on the issue, will prefer to accept the harassment of litigation to submitting to unjust and illegal taxation to gain freedom from suit.

2. The Decision Below Is in Conflict With the U. S. Industrial Chemicals Decision of This Court as to Permissible Reissue Claims Under 35 U. S. C. § 251.

Over the years the reissue patent statute has been regarded by this Court as a very special privilege which must not be abused by the owner of a patent, and wherein all statutory requirements must be satisfied in order that the reissued patent be valid, including the requirement that it be reissued for the "same invention" as that in the original. The determination of the Court of Appeals concerning Armstrong's reissue patent wherein the new claims 4 and 6 covering the receiver element alone compared to the original two-element claims are held to satisfy the statutory requirement of "same invention" involves a misconstruction and misapplication of 35 USC § 251. This creates a significant statutory question worthy of this Court's review.

This very special privilege to the patentee permits him to modify his patent contract to correct bona fide mistakes which caused his patent rights to fall short of what he believed he was entitled to, but ever since the first statute[9] was enacted in 1836 this Court has been alert to prevent that privilege from being abused to the detriment of the public, and has granted certiorari from time to time to correct abuses, lastly in 1942 because "of an apparent conflict with decisions of this Court and several Circuit Courts of Appeals," with respect to the statutory requirement that the reissue patent must "be for the *same invention* as the original patent." (Emphasis added.) *U. S. In-*

9. The first statutory right to reissue was embodied in the 3d Section of the Act of July 3, 1832—Chap. 4 Stat. at L. 559. This and subsequent statutes to 1887 are discussed in *Parker & Whipple Co.* v. *Yale Lock Co.*, 123 U. S. 87, at pages 96, 97. Reissue statute 35 U. S. C. 64, R. S. 4916, effective May 24, 1928, continued to the time of the present statute 35 U. S. C. 251, effective January 1, 1953.

dustrial Chemicals v. *Carbide & Carbon Corp.*, 315 U. S. 668, 669. This decision is important because this Court was interpreting the precise statute (§ 64) under which Armstrong reissued his patent in 1940, and the determination of the court below is at war with the principles of this *U. S. Industrial Chemicals* decision which the Court of Appeals failed to mention, let alone distinguish from the holding in the present case.

In *U. S. Industrial Chemicals* in discussing the statutory requirement of "same invention" this Court at pages 675-676 stated:

> "The question is whether, in the light of the disclosures contained in the two patents, they are for the same invention. This court has said that they are if the re-issue fully *describes* and *claims* the very *invention* intended to be secured by the original patent; if the reissue describes and claims only those things which were embraced in the *invention* intended to have been secured by the original patent; if the broader *claims* in the reissue are not merely suggested or indicated in the original specification but constitute parts or portions of the *invention* which were intended or sought to be *covered or secured* by the original patent. * * * And it is not enough that an *invention* might have been claimed in the original patent because it was suggested or indicated in the specification. It must appear from the face of the instrument that what is covered by the reissue was intended to have been *covered and secured* by the original." (Emphasis added.)

Armstrong *"covered and secured"* by the original claims only the *transmitter and receiver combination,* as the Court of Appeals itself acknowledged (App. A, p. 10a, *infra*). Each element and each step in such claims 1 and 2 is essential, for as this Court held in ARO I at page 344 of 365 U. S., "For if anything is settled in the patent law, it is that the combination covers only the totality of the

elements in the claim and that no element, separately viewed, is within the grant."

The error of the Court of Appeals in approving Armstrong's licensing of an unpatented element and collection of royalties from that licensing, as we have discussed herein, is directly related to the error here in holding the receiver claims in the reissue patent to be the "same invention" as the original patented transmitter-receiver combinations in claims 1 and 2. The error here was extending the two-element monopoly in the original patent 2,215,284, to include a new one-element monopoly on the receiver alone. Obviously, the new one-element claims (4 and 6) were not directed to the "same invention" as the original two-element combination claims.

Armstrong *omitted* in the new reissue claims 4 and 6 all of the transmitter steps of portion (a) in claim 1 (App. D, pp. 28a-30a, *infra*), and all of the transmitter structure defined in terms of "means" in portion (a) of claim 2. As this Court stated in *U. S. Industrial Chemicals* at page 677, "We think it plain that the reissue omitted a step in the process which was described and claimed as essential in the original patent."; and at page 678 held, "This court has uniformly held that the omission from a reissue patent of one of the steps or elements prescribed in the original, thus broadening the *claims* to cover a new and different combination, renders the reissue void, even though the result attained is the same as that brought about by following the process *claimed* in the original patent." (Emphasis added.) But here, the result from the one-element claimed subject matter is not the same, for the complete broadcasting system of claims 1 and 2, cannot be attained by just a receiver, or just by reception.

The Court of Appeals (App. A, pp. 10a, 11a, *infra*) ignored, or failed to understand that the transmitter element of portion (a) of claims 1 and 2 was *omitted* in the

new reissue claims 4 and 6, and that omitting the transmitter *element* of the original claims makes the reissue patent broader than the original patent. The statute permits broadening as well as a limiting reissue, but in either scope, the reissue patent must be to the "same invention," or that patent is invalid.

The decision below, thus raises a significant statutory question as to whether breaking the two-element monopoly of the original Armstrong patent into two-element and one-element monopolies in the reissue is maintaining a patent grant to the "same invention" within the meaning of the reissue patent statute, 35 U. S. C. § 251.

The impropriety of the Seventh Circuit's application of § 251 is readily apparent by considering that a *receiver alone* cannot function as both *transmitter and receiver* in the combination of original patent claims 1 and 2, nor can there be a radio wave to be broadcasted in a *transmission system* without a transmitter. The latter is omitted in claims 4 and 6, and certainly that is the essential element in the practice of the claimed system.. This omission from claims 4 and 6, broadens them, as this Court said in *U. S. Industrial Chemicals* at page 678 of 315 U. S., "to cover a new and different combination," rendering the reissue patent void. Decisions of appellate courts[10] subsequent to *U. S. Industrial Chemicals* do not place a different interpretation upon said decision, and are in conflict with the decision of the Seventh Circuit here.

There are more than 2500 reissue patents which are unexpired today, and more often than not a patent is reissued because some commercial situation prompted the patentee to change his original patent rights, suggesting that all such

10. Application of McCoy, 148 F. 2d 347, 350 (C. C. P. A. 1945); *Riley* v. *Broadway-Hale Stores*, 217 F. 2d 530, 532 (9 Cir. 1954); *Ballew et al.* v. *Watson*, 290 F. 2d 353, 355 (C. A. D. C. 1961).

unexpired patents are important in the economy. The decision of the court below can encourage holders of combination patents to reissue and add to the original monopoly on a multi-element combination, an additional monopoly on each of the elements of the combination or less than all of the multi-elements of the original combination, without any indication in the original patent that this new added monopoly was intended to have been patented. The Patent Office, under such decision, should grant all such applications for reissues. There were more than 68,000 original patents issued by the Patent Office in 1966, and that was the fourth consecutive year in which the number issued has increased substantially over the number in the previous year.

3. The Decision Creates a Novel and Important Problem Under 35 USC § 271(a) as to the Definition of the Infringing "Use" of a Combination Patent.

The statutory definition of infringement in 35 USC § 271(a) (App. C, p. 25a, *infra*) is, "whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent."

The Court of Appeals held with respect to the '069 patent (App. A, p. 13a, *infra*):

> "Here Motorola tested its receivers by tuning them to transmitters employing the Armstrong FM teachings. This constituted a 'use' of the system patent because the radio waves generated by the Armstrong transmitters were received and converted into sound by Motorola receivers. Motorola concedes that an unlicensed owner-user of an FM transmitter and receiver would violate the Armstrong system patents (apart from questions about their validity and applicability). Section 271(a) of the Patent Act does not require ownership of the system before infringe-

ment can occur. The test under the Act is whether there has been use of the system. As shown, such use occurred when Motorola tested these receivers."

The Court also held Motorola to be a direct infringer of the combination claims of the reissue '660 patent for the same reason (App. A, p. 15a, *infra*).

It is undisputed that Motorola made no FM transmissions as part of its supposed infringement of the four combination claims and exercised no control over the FM transmissions it used in testing its FM receivers (F217, 230 F. Supp. at p. 362). All it did was to turn on receivers and tune them in to one of the many Armstrong-licensed broadcasts on the air. Except that it did this with a greater number of receivers, it did no more than any member of the public does in tuning in his FM radio or TV receiver to an FM radio broadcast or television broadcast station which is on the air and which he desires to listen to.

The core of the Court of Appeals opinion, quoted above, is that a use of the broadcasted wave in a receiver is the same as a use of the transmitter. The opinion necessarily construes the words "patented invention" in § 271(a), as being broad enough to include more than the alleged invention stated in the combination claims in issue here. Each claim states that the "invention" is a combination of a transmitter and a receiver. The opinion says, in effect, that the "patented invention" also consists of doing *no more* than receiving a wave and reproducing it.

Moreover, the wave is merely the unpatentable result or the *function* of the operation of the transmitter, and is *not a transmitter element*. In *Corning et al.* v. *Burden* (1853), 15 Howard 252, this Court stated at page 268, "It is for the discovery or invention of some practicable method or means of producing a beneficial result or effect, that a patent is granted, and not for the result or effect

itself." This decision was followed in *Westinghouse* v. *Boyden Power Brake Co.* (1898), 170 U. S. 537, where this Court at page 555 quoted from the *Corning* decision, " 'But it is well settled that a man cannot have a patent for the function or abstract effect of a machine, but only for the machine which produces it.' " The wave, plainly, is not a transmitter element.

The holding that Motorola's testing was a "use" of the patented invention flies in the face of the clear meaning of the combination claims. Plainly, practice of the *method* claims (claim 1 in each patent) requires the operation of the transmitter and the conjoint operation of the receiver *by the infringer* in order to achieve the result defined. Similarly, the system claims to the transmitter *and* receiver (claim 2 in each patent) require that *the infringer* control both elements of the combination system claimed, or there is not a "use" of the "system." But, it is undisputed here that Motorola neither operated nor controlled an FM broadcast transmitter.

By its opinion, the Court of Appeals, in effect, rewrites each claim to give Armstrong a monopoly over making, selling and using of every receiver made to receive the kind of wave produced by the operation of the transmitter element in the present combination claims. The patent monopolies are thus converted from two-element combinations of a transmitter and a receiver into single-element claims on receivers only.

This broad interpretation of § 271(a) is in direct conflict with principles enunciated in the opinions of this Court.

In ARO I, at page 339 of 365 U. S., this Court said that "the claims made in the patent are the sole measure of the grant." At page 340, this Court quoted as follows: "*Mercoid Corp.* v. *Mid-Continent Invest.*, 320 U. S. 661, 667, . . .

'The patent is for a combination only. Since none of the separate elements of the combination is claimed as the invention, none of them when dealt with separately is protected by the patent monopoly.' "

At page 345 of 365 U. S., ARO I, this Court said, "No element, not itself separately patented, that constitutes one of the elements of a combination patent is entitled to patent monopoly, however essential it may be to the patented combination . . ."

In 1891, this Court in *McClain* v. *Ortmayer*, 141 U. S. 419, stated at page 423, "While the patentee may have been unfortunate in the language he has chosen to express his actual invention, and may have been entitled to a broader claim, we are not at liberty, without running counter to the entire current of authority in this court, to construe such claims to include more than their language fairly imports."

Although § 271(a) is the first statutory definition of direct patent infringement, and has been effective since January 1, 1953, this Court has not passed upon it. The need for a review of its interpretation by the Court of Appeals and an authoritative interpretation by this Court is compelling. As the number of patents[11] issued each year increases so does the number of combination patents. The scope to be given to the statutory concepts of "use" and "patented invention" thus becomes increasingly important.

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11. In the years 1963 through 1966, the number of United States patents issuing for those respective years has been in excess of 45,000, 47,000, 62,000, and 68,000.

The Petition Should Be Granted as to All of the Three Questions Posed.

The three questions posed by this petition concerning the licensing and interpretation of combination patents and the applicable patent statutes are important both to owners of combination patents and to the executive agencies that administer our antitrust policy. Any exercise of monopoly beyond the scope of the patent grant immediately raises an antitrust question. The boundaries between the permissible patent monopolies of combination claims and misuse of patents and antitrust violations were further clouded by the opinion of the court below. This Court should clarify them.

The practical impact of the uncertainty aggravated by the opinion of the Court of Appeals is not trivial. In the fields of radio and of television, there is not only broadcasting, as at issue here, but communication by voice, by code, and by picture using a system of elements which are remote or adjacent to one another, and which link continents together and control operations over the length and breadth of each continent. Remote control of electrical utility substations, oil wells, telephone transmitting stations, earth moving and handling equipment and even trains is extensively practiced and important to the public and to the economy. Furthermore, this affects significant governmental and business activities, and for radio and TV broadcasting and communication, patent control, as evidenced by the decision below, is in derogation of the freedom of the air waves which are a vital natural resource. The use of the air waves is of continuing concern to Congress and to this Court as a resource which can be appraised only in billions and billions of dollars in asset value.

In such fields, and in others, not only are there com-

binations of elements in adjacent as well as in spaced apart relation with respect to one another, but such elements may be in large and small machines, in a single assembly or in a plurality of assemblies working together, and they may be in chemical processes using complex machinery or using simple machinery or equipment. In all of these systems, equipments, and processes it is common for different manufacturers to make different parts of the complete equipments required to provide the entire patented combination. The permutations and combinations are tremendous of possible ways an owner of a multi-element combination patent may increase his profit outside the scope of his patent, by threat of suit, or actually bringing suit as here, against the manufacturer of an unpatented element in a combination. The patentee can choose any one of many programs by which he can gain the greatest profit, for the Court of Appeals here did not distinguish between the return from broadcaster licensing and that from receiver-manufacturer licensing. Armstrong has been given the same monopoly and possibility of recovery from suit under all four of his combination claims as though he had originally obtained separate patents covering each element of the complete combinations.

The total number of licenses required to avoid an infringement suit under the combination patent claims, as the court below has determined it, is left to the ingenuity of the patent owner, with the benefit of suit or threat of suit against a manufacturer, user, or vendor of an unpatented element as the patent owner's leverage to accomplish his final goal. In the two combination patents here, each claim has only two-elements, but the principle established by the opinion below applies to claims with any number of elements.

Conclusion.

The claims of a patent are the measure of the grant, and a patent for a combination does not convey to the patentee exclusive rights to each of the several elements of the combination. But, respondent has deliberately violated this basic principle. By issuing licenses restricted to the use of one element only of the combination, by reissuing one patent to include claims not for the "same invention" as its original combination claims but to an element thereof, and by asserting combination claims against the manufacturer of one element only of the combination, respondent has illegally extended the monopoly of the patent grant and is guilty of flagrant misuse of the patents to which this petition is addressed.

The recent condoning of this misuse by the lower courts is an invitation to unjust enrichment by owners of combination patents in every field. It is, therefore, respectfully urged that this Petition for Writ of Certiorari be granted.

Respectfully submitted,

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July, 1967.

APPENDIX A.

OPINION OF THE COURT OF APPEALS.

IN THE UNITED STATES COURT OF APPEALS,

For the Seventh Circuit.

No. 14830 SEPTEMBER TERM 1966—JANUARY SESSION, 1967

ESTHER MARION ARMSTRONG, EXECUTRIX, *Plaintiff-Appellee,*

vs.

MOTOROLA, INC., *Defendant-Appellant.*

Appeal from the United States District Court for the Northern District of Illinois, Eastern Division.

February 6, 1967.

Before HASTINGS, *Chief Judge,* and FAIRCHILD and CUMMINGS, *Circuit Judges.*

CUMMINGS, *Circuit Judge.* This patent infringement action concerns three frequency modulation (FM) patents owned by the late Major Edwin Armstrong. The plaintiff is his widow and executrix.

The three patents involved are No. 1,941,069 ('069) covering the wideband FM system, No. 1,941,066 ('066) covering the synchronous heterodyne method for FM reception, and reissue patent No. 21,660 ('660) covering a preemphasis and deemphasis system for use in FM. The

'069 and '066 patents issued on December 26, 1933, and reissue patent '066 issued on December 17, 1940.

In an exhaustive opinion, District Judge Robson held that the three patents were valid and infringed by Motorola, Inc.'s FM receivers. He also held that Motorola's FM communication equipment infringed the '069 and '066 patents. For a complete description of the history of this litigation, reference is made to the District Court's extensive findings reported in 230 F. Supp. 337 (N. D. Ill. 1964). The same patents were involved in *Armstrong* v. *Emerson Radio and Phonograph Corp.*, 179 F. Supp. 95 (S. D. N. Y. 1959), where, in a very thorough opinion, Judge Palmieri also held them valid and infringed.

In the present case, with the consent of the parties, the District Judge appointed George R. Town, Dean of the College of Engineering at Iowa State University, to act as his impartial technical expert. Dean Town filed a report on the technical issues in the case and excerpts from his report were later received in evidence.

To avoid an unnecessarily voluminous opinion, the facts of the present case will be discussed in conjunction with the contested issues. Because of their ready accessibility, the 339 findings below (230 F. Supp. at pp. 338-379) will only be highlighted here.

Estoppel

Motorola first claims that by December 1948, when notices of infringement were sent to Motorola and others, Armstrong was estopped from suing Motorola on these three patents. Based on 36 findings of fact, most of them carefully annotated by references to the trial record and the exhibits, the District Court rejected this defense. Unless clearly erroneous, those findings are binding on appeal. *Armour & Co.* v. *Wilson & Co.*, 274 F. 2d 143, 149, 156 (7th

Cir. 1960). In our view, the findings bearing on the estoppel defense are not clearly erroneous. Based on those findings, the District Court properly rejected the estoppel defense. The related defense of laches, rejected below, was not renewed in this Court.

In 1940, Motorola decided to manufacture and sell FM apparatus for police and mobile communication. In the same year, Motorola decided to add FM broadcast receivers to its line of home receivers. At the time Motorola entered the FM market, Major Armstrong was acknowledged as the inventor of the wideband FM system. Motorola's predecessors as FM apparatus manufacturers had taken licenses under Major Armstrong's FM patents.[1]

Upon Motorola's inquiry in April 1940, Major Armstrong sent appropriate patent license forms to Motorola. He advised Motorola that his '069 patent covered the FM system, that his '066 patent was important in the receiver field, and that he owned other patents useful in the FM system. Motorola knew that Major Armstrong expected to receive royalties on a uniform basis from all manufacturers of wideband FM apparatus and that he was actively engaged in establishing a uniform licensing system.

Early in 1941, Motorola commenced license negotiations with Armstrong. In May 1941, a Motorola representative stated to Radio Corporation of America (RCA), which had not taken a license under the Armstrong patents, that Motorola might take a license thereunder if Armstrong would reduce his royalty rate from 2½% and 3% to 1%.

The license negotiations between Armstrong and Motorola terminated in August 1941, when Major Armstrong advised Motorola's counsel that he was designat-

1. Major Armstrong's early FM licensees included General Electric Company, Zenith Radio Corporation, Scott Radio Laboratories, Inc., Stromberg-Carlson Company, Stewart-Warner Corporaton, Radio Engineering Laboratories, and F. M. Link.

ing his lawyer, Alfred McCormack, to conduct further negotiations with Motorola for a license under Armstrong's patents. Instead of pursuing those negotiations, Motorola, on advice of its patent counsel, decided late in 1941 that it was not infringing Armstrong's patents and therefore would not take a license from him. In a May 1945 letter to American Telephone & Telegraph Co., Motorola reiterated that it was not infringing the Armstrong FM patents.

In March and April 1941, Armstrong advised the Secretaries of War and of the Navy respectively that "so long as the present national and international emergency shall exist", he would waive all royalties under his FM patents with respect to FM apparatus manufactured for the United States for military purposes. This waiver was a matter of public knowledge. Throughout World War II, Major Armstrong was primarily engaged in research work for the Armed Forces, as was well known.

During World War II, Motorola and other radio manufacturers ceased the production of home receivers and other equipment for broadcast purposes. However, from 1941 through 1945, Motorola did sell FM equipment for police communication under War Production Board releases. It sold no television receivers until 1947.

In January 1946, Western Electric Company took an Armstrong license for FM mobile communication apparatus. Until 1950, Western Electric paid royalties to Armstrong with respect to such apparatus, including substantial quantities that Western Electric purchased from Motorola. In June 1946, Motorola's patent counsel protested Western Electric's payment of Armstrong royalties on Motorola's apparatus, stating that "over the past six years * * * it has been and still is our considered opinion that Motorola's FM equipment does not infringe any valid Armstrong patent. On this basis, Galvin [Manufacturing Company, predeces-

sor to Motorola] has not taken a license from Major Armstrong."

World War II ended on September 2, 1945, but the official cessation of hostilities did not occur until December 31, 1946 (50 App. USCA, p. XXII). By the end of 1947, the post-war market for FM receivers and television receivers reached significant proportions. At that time, Motorola entered the market and sold substantial quantities of such receivers in competition with Armstrong licensees.[2] Motorola's other competitors included RCA, Philco Corporation, Emerson Radio and Phonograph Corporation, and Admiral Corporation. These four manufacturers had not been licensed by Major Armstrong either. In July 1948, a few months after the resurgence in sales of FM apparatus, Major Armstrong filed suit against RCA for infringement of the '066, '069 and reissue '660 patents. Six months thereafter, Major Armstrong sent a written notice of infringement to Motorola and other alleged infringers of his FM patents.

In January 1949, RCA informed its licensees, including Motorola, that RCA would complete the Armstrong-RCA litigation before any other contemplated patent infringement suits could be started and completed by Armstrong.

From 1953 to 1957, because of unfavorable market conditions, Motorola discontinued the manufacture and sale of FM broadcast receivers. The present complaint against Motorola was filed in January 1954. The Armstrong suit against RCA was settled for $1,040,000 in December 1954. Armstrong's complaint against Emerson was filed in December 1953, and a judgment against Emerson was entered in September 1959. See 179 F. Supp. 95.

The District Court found that Motorola's refusal to take

2. These Armstrong licensees included Westinghouse Electric Corporation, Hallicrafters Company, and the major companies listed in note 1, *supra*.

a license from Major Armstrong was based on its opinion that it was not infringing his patents and was not in reliance upon any acquiescence by Major Armstrong. Instead, he openly maintained that all manufacturers of wideband FM apparatus should be licensed by him. Therefore, there was no basis for Motorola's claim of estoppel. Our study of the record shows that the District Court's findings may not be disturbed because they not only satisfy the "clearly erroneous" rule but are supported by substantial evidence.

While actively engaged in war work, Major Armstrong was justified in not suing any infringers. During the period of World War II, "all reasonable postponement and suspension of litigation was a public duty" (*Alliance Securities Co.* v. *De Vilbiss Mfg. Co.*, 41 F. 2d 668, 669-670 (6th Cir. 1930); *Harries* v. *Air King Products Co.*, 87 F. Supp. 572, 588-589 (E. D. N. Y. 1949), affirmed, 183 F. 2d 158, 159 (2nd Cir. 1950)). Moreover, Armstrong's 1948 suit against RCA justified Armstrong's refraining from suing Motorola simulaneously. As stated in *Montgomery Ward & Co.* v. *Clair*, 123 F. 2d 878, 883 (8th Cir. 1941):

> "An inventor is not required to litigate the validity of his patent against every possible infringer. A suit pending to sustain the validity of a patent is notice to all infringers of the insistence of the patentee upon his claimed rights."

Judge Learned Hand enunciated this same proposition in *Clair* v. *Kastar, Inc.*, 148 F. 2d 644, 646 (2nd Cir. 1945), certiorari denied, 326 U. S. 762, where he also pointed out that the "infringer" should have brought an action for a declaratory judgment. Here too Major Armstrong's and his lawyer's 1941 correspondence with Motorola was sufficiently threatening to give Motorola standing to seek a judgment of non-infringement. *Cf. Sticker Industrial Supply Corp.* v. *Blaw-Knox Co.*, 367 F. 2d 744 (7th Cir. 1966).

In *Lebold* v. *Inland Steel Co.*, 125 F. 2d 369, 375 (7th Cir. 1941), certiorari denied, 316 U. S. 675, Judge Lindley thoroughly explored the estoppel doctrine. As noted there, "Estoppel arises only when one has so acted as to mislead another and the one thus misled has relied on the action of the inducing party to his prejudice." Here Major Armstrong never abandoned his position that Motorola and other companies not licensed under his FM patents were infringers. Also, Motorola did not rely upon any inaction of Major Armstrong but instead decided in late 1941 that it was not infringing his patents and therefore would not take a license. Accordingly, the defense of estoppel must fail. None of the estoppel cases upon which Motorola relies departs from the principles enunciated in the *Lebold* case. Since they are all distinguishable on their facts, they are of no avail to Motorola.

Validity of the Three Patents

Motorola contends that the three patents in question are invalid. Its first claim is that the '069 patent is invalid as indefinite. A similar argument was rejected in *Armstrong* v. *Emerson Radio and Phonograph Corp.*, 179 F. Supp. 95, 128 (S. D. N. Y. 1959) and was also rejected in the District Court here. Motorola asserts that the claims of '069 are indefinite because "lacking a numerical value for the bandwidth." The claims provide that the frequency swing of the transmitter shall be "substantially greater in extent than the frequency range of good audibility", and that the receiver shall be fully responsive to such swings but substantially nonresponsive to lesser frequency variations caused by disturbances. In other words, the claims of the '069 patent called for operation in a bandwidth several times greater than the conventional and optimum bandwidth known in the prior art.

Until Major Armstrong's discovery, the court's expert, Dean Town, stated that to reduce noise, the bandwidth of circuits was decreased. Major Armstrong first discovered that noise reduction could be effected by a wide-band circuit system, and this was the teaching of the '069 patent. Since the two claims of the '069 patent distinctly point out and distinctly claim the art of eliminating or suppressing noise in radio by the wide-band system, it was unnecessary to specify any particular variation in frequency. See 35 USC § 112.

Armstrong is entitled to patent protection on all bandwidths at which his discovery will work well. To restrict him to only one precise width would be to destroy the value of his patent, since anyone who wanted to evade it could do so simply by manufacturing receivers that operate at any other bandwidth.

Motorola contends that the '069 patent was anticipated by Armstrong's prior art patent No. 1,941,447, under which Motorola was purportedly licensed by RCA and others. However, the uncontroverted testimony shows that the '447 patent taught that to reduce noise, the bandwidth is made as narrow as possible. A receiver built under the '447 patent could not operate over a bandwidth several times the amplitude modulation (AM) bandwidth. Since the '447 patent did not disclose the wideband FM system, it did not anticipate the '069 patent and is of no support to Motorola.

Motorola next assails the validity of the '066 patent covering the synchronous heterodyne method for frequency modulation reception. This patent involved heterodyning or combining the received FM wave with itself to reproduce the signal. Again, the validity of this patent was upheld in *Armstrong* v. *Emerson Radio and Phonograph Corp.*, 179 F. Supp. 95 (S. D. N. Y. 1959) as well as here. Motorola now asserts that no one ever used the '066 circuit experimentally, but at the trial Motorola did not dispute the fact

that Major Armstrong had actually so used it. Armstrong's amendment to his '066 application disclosed that the '066 circuit had been working in reception across the continent for some time; this too was undisputed by Motorola in the District Court. It is immaterial that patent '066 did not disclose the particular receiver embodying his synchronous heterodyne method that later achieved commercial success, for the validity of a patent is not impaired by the fact that experimentation or the exercise of judgment is necessary to obtain the particular results desired. *Hildreth* v. *Mastoras*, 257 U. S. 27, 34; *Binks Manufacturing Co.* v. *Ransburg Electro-Coating Corp.*, 281 F. 2d 252, 256-257 (7th Cir. 1960), certiorari dismissed, 366 U. S. 211.

Motorola also relies on prior references as disclosing the synchronous heterodyne method for FM reception. We agree with Judge Palmieri in the *Emerson* case and, with Judge Robson here that Horton patent No. 1,856,707 (issued May 3, 1932) did not disclose the synchronous heterodyne method for FM reception and did not anticipate the '066 patent. Also, it should be noted that the Board of Appeals of the Patent Office held that Armstrong was the prior inventor of the '066 synchronous heterodyne method for FM reception and was entitled as against RCA to the instant claims commensurate with the full scope thereof. In that interference proceeding, Crosby had disclosed a circuit that was essentially the same as Armstrong's and had also disclosed another circuit that was essentially the same as the Foster-Seeley circuit employed by Motorola. In deciding the interference in favor of Armstrong, the Board of Appeals held that the two forms of circuit were equivalent. Since Motorola's ratio detector and Bond circuit are essentially the same as the Foster-Seeley circuit, Motorola's use of the Foster-Seeley circuit, the ratio detector and the Bond circuit is within the broad range of equivalents to which the pioneer '066 patent was entitled. *Hildreth* v. *Mastoras*, 257 U. S. 27, 36.

Motorola contends that the '066 patent is invalid for overclaiming, on the ground that the District Court construed the claims to cover an entire receiver. Actually, the court only construed the claims to cover this synchronous heterodyne system for the detector circuit of an FM receiver, so that Motorola's contention must be rejected.

Motorola urges that the reissue patent '660 is invalid on the ground that it claims an invention which was not claimed or defined in the original patent. It should be noted that the Board of Interference Examiners found that Armstrong's proofs were persuasive that he had first used the preemphasis and deemphasis system disclosed in the original patent as early as 1936. In this reissue patent, the receiver claims cover the structure and operation of a wideband FM receiver with deemphasis circuits and a wide admittance band. The only change in the specification of the reissue patent as compared with the original patent No. 2,215,284 was to substitute "improvement in both the fidelity and signal to noise ratio" for "increase in both the fidelity and noise level." As found by the District Court, the only significant difference between claims 1, 2 and 3 of the reissue patent, as compared with claims 4, 5 and 6 which appear in the reissue patent but not in the original patent, is that claims 1, 2 and 3 cover the transmitter and receiver in combination, or a method of transmitting and receiving, whereas claims 4, 5 and 6 cover a receiver, or a method of reception for receiving an FM wave pre-distorted as provided in claims 1, 2 and 3. Therefore, the reissue patent does not claim a completely different invention but satisfies the terms of the then reissue statute (35 USC, former Section 64),[3] providing that a patent for the same invention may be reissued to the patentee in certain circumstances.

3. The reissue of defective patents is now governed by 35 USC § 251, but the parties agree that both this provision and former Section 64 require that the reissue be confined to the invention disclosed in the original patent.

Here the receiver claims specify that the receiver be adapted for reception of a preemphasized wave, but such wave would be produced only by a transmitter operated as disclosed in the original patent.

Motorola also relies on a July 1939 article by Messrs. Fyler and Worcester, but their publication only respected such information as had been derived by their employer, the General Electric Company, from Major Armstrong. In addition, the Fyler and Worcester article was not published more than a year before the original application for patent No. 2,215,284, and it may not be used to invalidate under 35 USC 102(b) the reissue patent resulting from the reissue application of October 21, 1940. *Union Asbestos & Rubber Company* v. *Paltier Corporation*, 298 F. 2d 48, 51 (7th Cir. 1962), certiorari denied, 369 U. S. 865.

Infringement.

The District Court concluded that all three patents in question were infringed by Motorola. Judge Palmieri reached the same conclusion as to Emerson (179 F. Supp. at pp. 128-129). We agree with the conclusion that Motorola did infringe these patents.

The bandwidth of the circuits of the Motorola FM broadcast television sound and communication receivers are adapted to operate in an FM system with a deviation ratio of five or more for the audible signals to be transmitted and reproduced. These are all wideband FM receivers, the bandwidth being about five times that required in conventional radio signaling. Since such increased bandwidth is in accord with the '069 claims, Motorola clearly infringed the '069 patent.

In comprehensive findings, supported by references to the record and exhibits, the District Court pointed out how Motorola television sound receivers TS-4 and TS-5 are

especially adapted for use in the Armstrong wideband FM system and have no practical use except to receive FM waves sent out by television sound transmitters. The effective bandwidth of each of these receivers is at least 50 kilocycles. We concur in those findings and the ensuing conclusion of infringement.

In equally careful findings, the District Court has shown how Motorola's FM broadcast receivers HS87 and HS89 are capable of receiving FM waves sent out by FM broadcast transmitters, and that each of such receivers has an effective bandwidth of at least 150 kilocycles. Since these receivers were also especially adapted for use in the Armstrong wideband FM system and have no other practical use, the District Court correctly concluded that they also violated patent '069.

As to the Motorola 25-50 Mc and 152-162 Mc FM communication equipment, the District Court noted that their effective bandwidth was at least 30 kilocycles. Since they too were found to be an application of Armstrong's wideband FM system, the District Court properly concluded that they infringed patent '069 covering the wideband FM system. As to both the '069 and '066 patents, it is significant that the Western Electric Company paid royalties to Armstrong from 1946 to 1950 with respect to Motorola two-way FM mobile communication equipment purchased from Motorola and sold by Western Electric. Being a two-way system, this equipment clearly infringed the system claims of the two patents.

With respect to all the foregoing apparatus, Motorola employed a radio frequency bandwidth ten times the range of audible frequencies carried by the band. This was the same range used in Major Armstrong's example in his '069 patent and dramatically illustrates Motorola's infringement.

Motorola argues that the claims of patent '069 involve a method of transmitting *and* receiving FM waves, so that Motorola could not have infringed '069 except in its two-way police communication system. In this connection, Motorola argues that listening with its receivers to a licensed Armstrong station puts Motorola's receivers within the licensed combination (*i.e.*, transmitter and receiver). But if the listening is unauthorized, then the use of the Motorola receivers infringes the combination patent. Here Armstrong's transmitter licenses granted no license for reception (except for monitoring by the licensee). Therefore it follows, even in accordance with the understanding of Motorola's briefs, that Motorola's testing of its receivers by unlicensed listening to the FM broadcasts constituted direct infringement. Motorola argues that its receivers could not violate the Armstrong system patents on transmitters *and* receivers. If this argument had merit, Armstrong would not have succeeded in garnering so many prominent and patent-conscious manufacturers as receiver-licensees! Section 271(a) of the Patent Act (35 USC § 271(a)) provides that "whoever without authority * * * uses any patented invention" is an infringer. Here Motorola tested its receivers by tuning them to transmitters employing the Armstrong FM teachings. This constituted a "use" of the system patent because the radio waves generated by the Armstrong transmitters were received and converted into sound by the Motorola receivers. Motorola concedes that an unlicensed owner-user of an FM transmitter and receiver would violate the Armstrong system patents (apart from questions about their validity and applicability). Section 271(a) of the Patent Act does not require ownership of the system before infringement can occur. The test under the Act is whether there has been use of the system. As shown, such use occurred when Motorola tested these receivers.

As seen, Motorola became a direct infringer by testing its receivers commercially by tuning them to FM broadcast signals and listening to them. Cf. *Radio Corporation of America* v. *Andrea,* 90 F. 2d 612, 614 (2nd Cir. 1937). Motorola also became a contributory infringer by selling its receivers to unlicensed listeners of FM broadcasts, for whoever sells a component of a patented system, knowing that it is especially made for use in infringement of the patent and not for other use, is liable as a contributory infringer. *Aro Manufacturing Co., Inc.* v. *Convertible Top Replacement Co., Inc.,* 377 U. S. 476, 482-493; 35 USC § 271(c).

Motorola attempts to assert that it did not have the requisite knowledge that is an element of contributory infringement, but the record belies this. In 1940, Motorola knew that Armstrong expected to receive royalties on a uniform basis from all manufacturers of FM apparatus. Armstrong had even sent Motorola his form of license for home receivers. Armstrong's patents were of such importance that they were the talk of the industry, and Motorola knew that receivers like its own were licensed by Armstrong. Thus 35 USC § 271(c) is satisfied. In addition, Armstrong's two notices of infringement (discussed *infra* under Notice of Infringement) satisfied the contributory infringement knowledge requirement.

As to the '066 synchronous heterodyne method patent, the District Court found that certain Motorola receivers included a balanced detector circuit known as the Foster-Seeley discriminator, that other Motorola receivers employed a balanced detector known as the ratio detector, and that still other Motorola receivers employed a balanced detector circuit known as the Bond circuit. Motorola claims that the '066 patent could not support claims that covered use of circuits such as the Foster-Seeley discriminator, the detector ratio, and the Bond circuit.

However, such an argument was rejected by the Board of Appeals of the Patent Office during the proceeding involving claims 8, 9 and 10 of the '066 patent in an interference with Crosby patent 2,229,640 owned by RCA. The District Court was of course entitled to consider this interference decision and to give it appropriate weight. *Radio Corporation of America* v. *Radio Engineering Laboratories, Inc.*, 293 U. S. 1, 7. Since the synchronous heterodyne method has been embodied by Motorola in all of its FM receivers, the conclusion that patent '066 had been infringed was proper.

With respect to reissue patent '660 covering a preemphasis and deemphasis system for use in FM broadcasting and television sound broadcasting, the District Court found that Motorola's HS87 and HS89 FM broadcast receivers and its TS-4 and TS-5 television sound receivers were designed for use in a system having an amount or degree of preemphasis and deemphasis disclosed in the reissue patent. Therefore, the District Court correctly concluded that Motorola had infringed claims 1, 2, 4 and 6 of reissue patent '660. As to the receiver claims (4 and 6) of reissue patent '660, Motorola has argued only that invalid claims cannot be infringed. Thus Motorola concedes infringement of such claims if, as we have already held, the claims were valid. For the reasons given above with respect to direct and contributory infringement of patent '069, as to reissue patent '660, Motorola was a direct and contributory infringer under the system claims 1 and 2 (transmitter and receiver) and a direct infringer under receiver claims 4 and 6.

Patent Misuse.

Motorola argues that Armstrong's receiver licenses constituted a misuse barring any recovery on receivers. This argument was rejected below and in the *Emerson* case (179 F. Supp. at p. 128). Motorola advances two separate grounds to support its misuse argument. One ground is that Armstrong's licensing of receiver manufacturers under the *system* patents attempted to extend the patent monopoly to an unpatented article, namely, the receiver. We reject this ground because we have already held that Motorola's unlicensed use of receivers does infringe the system claims.

Motorola's other ground to support its defense of misuse is that it was unlawful for Armstrong to restrict the classes of consumers to whom manufacturer-licensees could sell. Motorola has stated no authority for the proposition that unlawful license restrictions protect a non-licensee (such as Motorola) from infringement liability. However, under *General Talking Pictures* v. *Western Electric Co.*, 304 U. S. 175, 305 U. S. 124, the license restrictions were lawful. There it was determined that:

> "the patentee may grant a license 'upon any condition the performance of which is reasonably within the reward which the patentee by the grant of the patent is entitled to secure.' The restriction here imposed is of that character. The practice of granting licenses for a restricted use is an old one, see *Rubber Company* v. *Goodyear*, 9 Wall. 788, 799, 800; *Gamewell Fire-Alarm Telegraph Co.* v. *Brooklyn*, 14 F. 255. So far as appears, its legality has never been questioned." (305 U. S. at p. 127.)

There the Court noted that the parties had even stipulated that it was a common practice to grant such licenses (*idem*).

Motorola's analysis of later cases has not convinced

us that the *General Talking Pictures* case is no longer good law. In any event, it was certainly good law at the time that Armstrong was granting the licenses assailed by Motorola. Armstrong was certainly not guilty of any unclean hands by relying upon the then patent law in formulating its licenses. The licenses in that case were of greater anti-competitive effect than those here. Also the accused infringer, The American Transformer Company, was a licensee and surely in a better position to defend against a charge of infringement than a non-licensee such as Motorola. The principal authority advanced by Motorola is *United States* v. *Univis Lens Co.*, 316 U. S. 241, but that was a Sherman Act case in which the patentee had been using his patent to achieve resale price maintenance and therefore the case is not in point.[4]

Notice of Infringement.

The District Court found that Armstrong's letters of December 15 and 20, 1948, constituted notice of infringement.[5] Judge Palmieri reached the same conclusion with respect to the December 20 letter in the *Emerson* suit (179 F. Supp. at p. 99).

The letter of December 20 notified Motorola that it was infringing '066, '069 and reissue patent '660 "by practicing methods, and by making, using and selling apparatus, embodying inventions claimed in said patents

4. Motorola's reply brief relies on *Chicago Metallic Manufacturing Co.* v. *Edward Katzinger Co.*, 139 F. 2d 291, 293 (7th Cir. 1943), affirmed, 329 U. S. 394, but there, as in *Univis Lens Co.*, the license agreement carried a provision for price-fixing, as did the licenses in *Philad Co.* v. *Lechler Laboratories, Inc.*, 107 F. 2d 747 (2nd Cir. 1939). Also, this Court did not pass upon the validity of the Katzinger patents.

5. The question whether Motorola received constructive notice prior to December 20, 1948, by reason of patent marking on apparatus sold by Armstrong's licensees was reserved for hearing at the accounting and for determination by the District Court thereafter (230 F. Supp. at p. 380). That question is not reached here.

and each of them." This letter enclosed a longer letter or statement dated December 15, 1948, concerning the three patents. The four-page December 15 statement of Major Armstrong explained that the transmitter and receiver covered by patent '069 were complementary, and that no FM receiver manufacturer could determine whether its receiver worked without utilizing a transmitter and receiver, working together, according to the method and teachings of '069. This letter predicted that the courts would protect Armstrong's invention from direct infringement *or contributory infringement* and stated his intention to enforce his three patents "against infringing manufacturers."

The applicable statute (35 USC § 287) merely requires "proof that the infringer was notified of the infringement and continued to infringe thereafter." The present notice of infringement is sufficient under the statute. *Smith* v. *Dental Products Co.*, 140 F. 2d 140, 151-152 (7th Cir. 1944), certiorari denied, 322 U. S. 743. There we held that the notice provision of the statute (then 35 USC § 49) was satisfied if the infringer were given the same information as the statute requires for patent marking. The marking need only contain the word "patent" (or "pat.") and the number of the patent (35 USC § 287), and the December 20 letter of course contained this information. Cf. *Dunlap* v. *Schofield*, 152 U. S. 244, 247-248. Since these two letters show "that the alleged contributory infringer knew [from the letters] that the combination for which his component was especially designed was both patented and infringing" (*Aro Manufacturing Co.* v. *Convertible Top Replacement Co.*, 377 U. S. 476, 488), Motorola also cannot properly assert that it was not given any notice as to contributory infringement.

We have examined the other contentions raised by Motorola and find them without merit. Therefore, the judgment of the District Court is affirmed.

UNITED STATES COURT OF APPEALS

For the Seventh Circuit

Chicago, Illinois 60604

Monday, February 6, 1967.

Before

Hon. John S. Hastings, Chief Judge;
Hon. Thomas E. Fairchild, Circuit Judge;
Hon. Walter J. Cummings, Jr., Circuit Judge.

ESTHER MARION ARMSTRONG,
Executrix,
Plaintiff-Appellee,
No. 14830 *vs.*
MOTOROLA, INC.,
Defendant-Appellant.

Appeal from the United States District Court for the Northern District of Illinois, Eastern Division.

This cause came on to be heard on the transcript of the record from the United States District Court for the Northern District of Illinois, Eastern Division, and was argued by counsel.

On consideration whereof, it is ordered and adjudged by this court that the judgment of the said District Court in this cause appealed from be, and the same is hereby, Affirmed, with costs, in accordance with the opinion of this Court filed this day.

APPENDIX B.

Esther Marion ARMSTRONG, Executrix,
Plaintiff,

v.

MOTOROLA, INC., Defendant.

No. 54 C 19.

United States District Court
N. D. Illinois, E. D.

May 14, 1964.

* * * * *

CONCLUSIONS OF LAW AND MEMORANDUM OF DISTRICT COURT.

Conclusions of Law.

1. This Court has jurisdiction over the parties and the subject matter. 28 U. S. C. §§ 1331, 1338.

2. The Executrix was properly substituted as plaintiff as a result of orders by this Court, dated March 28, 1955, and April 12, 1955. *Pierce* v. *Allen B. DuMont Laboratories, Inc.*, 297 F. 2d 323 (3rd Cir. 1961); *Armstrong* v. *Allen B. DuMont Laboratories*, 137 F. Supp. 659 (D. Del. 1955); *Armstrong* v. *Emerson Radio and Phonograph Corp.*, 132 F. Supp. 176 (S. D. N. Y. 1955), followed by that Court in its later decision reported at 179 F. Supp. 95.

3. The '069 patent is valid and Motorola has infringed claims 1 and 2 thereof by the manufacture and sale of FM

broadcast receivers, television sound receivers and FM communication apparatus. For liberality of construction and broad protection to be accorded to patents on inventions of great merit and broad scope, see *Rubber Company* v. *Goodyear*, 9 Wall. 788, 76 U. S. 788, 19 L. Ed. 566 (1869); *Leeds & Catlin Co.* v. *Victor Talking Mach. Co.*, 213 U. S. 301, 29 S. Ct. 495, 53 L. Ed. 805 (1909); *Eibel Process Co.* v. *Minnesota & Ontario Paper Co.*, 261 U. S. 45, 43 S. Ct. 322, 67 L. Ed. 523 (1923); *Wright Co.* v. *Herring-Curtiss Co.*, 177 F. 257 (C. C. 1910), aff'd final hearing, 204 F. 597, aff'd 211 F. 654 (2nd Cir. 1914) and companion case *Wright Co.* v. *Paulhan*, 177 F. 261 (C. C. S. D. N. Y. 1910); *American Stainless Steel Co.* v. *Ludlum Steel Co.*, 290 F. 103 (1923), and the decision on the accounting 16 F. 2d 823 (S. D. N. Y. 1926); *Permutit Co.* v. *Wadham*, 13 F. 2d 454 (6th Cir. 1926), rehearing denied 15 F. 2d 20; *Smith* v. *Snow*, 294 U. S. 1, 55 S. Ct. 279, 79 L. Ed. 721 (1935). For plaintiff's right to recover on theory of contributory infringement, see *Leeds & Catlin Co.* v. *Victor Talking Mach. Co., supra; Stewart-Warner Corporation* v. *Le Vally*, 15 F. Supp. 571 (N. D. Ill. 1936), affirmed *Lincoln Engineering Co. of Illinois* v. *Stewart-Warner Corporation*, 91 F. 2d 757 (7 Cir. 1937), reversed on other grounds 303 U. S. 545, 58 S. Ct. 662, 82 L. Ed. 1008; *Girdler Corporation* v. *E. I. DuPont De Nemours & Co.*, 56 F. Supp. 871 (D. Del. 1944), affirmed per curiam 152 F. 2d 757 (3rd Cir. 1946); *Detroit Lubricator Co.* v. *Toussaint*, 57 F. Supp. 837 (N. D. Ill. E. D. 1944), *Metallizing Engineering Co.* v. *Metallizing Co. of America*, 62 F. Supp. 274, 276-277 (S. D. N. Y. 1945); *Florence-Mayo Nuway Co.* v. *Hardy*, 168 F. 2d 778 (4th Cir. 1948); *Harris* v. *National Machine Works*, 171 F. 2d 85 (10th Cir. 1948); 35 U. S. C. § 271(d) (3) 1952. See Memorandum Opinion of this Court dated June 14, 1961.

4. The '066 patent is valid and Motorola has infringed

claims 8, 9 and 10 thereof by the manufacture and sale of FM broadcast receivers, television sound receivers and receivers for FM communication apparatus.

5. The Reissue patent is valid and Motorola has infringed claims 1, 2, 4 and 6 thereof by the manufacture and sale of FM broadcast receivers and television sound receivers.

6. Motorola had no license under the patents in suit by virtue of any license that it may have had under the '447 patent.

[7-9] 7. Plaintiff's right to recover damages is not barred by laches. *Amalgamated Dental Co.* v. *Lang Dental Mfg. Co.*, 200 F. Supp. 814 (N. D. Ill. E. D. 1961); *Howe* v. *General Motors Corporation*, 167 F. Supp. 330 (N. D. Ill. E. D. 1958); *Pierce* v. *International Telephone & Telegraph Corp.*, 147 F. Supp. 934 (D. N. J. 1957). Armstrong was justified in not filing suit during World War II. *Alliance Securities Co.* v. *De Vilbiss Mfg. Co.*, 41 F. 2d 668 (6th Cir. 1930); *Mills Novelty Co.* v. *Monarch Tool & Mfg. Co.*, 49 F. 2d 28 (6th Cir. 1931), certiorari denied 284 U. S. 662, 52 S. Ct. 37, 76 L. Ed. 561; *Harris* v. *Air King Products Co.*, 87 F. Supp. 572, affirmed 183 F. 2d 158 (2nd Cir. 1950). Armstrong was justified in not filing suit against Motorola while prosecuting an infringement suit against RCA. *Montgomery Ward & Co.* v. *Clair*, 123 F. 2d 878 (8th Cir. 1941); *Clair* v. *Kastar, Inc.*, 148 F. 2d 644 (2nd Cir. 1945); *Stearns-Roger Mfg. Co.* v. *Brown*, 114 F. 939 (8th Cir. 1902); *Timolat* v. *Franklin Boiler Works Co.*, 122 F. 69 (2nd Cir. 1903); *United States Mitis Co.* v. *Detroit Steel & Spring Co.*, 122 F. 863 (6th Cir. 1903); *Clements Mfg. Co.* v. *Eureka Vacuum Cleaner Co.*, 70 F. 2d 701 (2nd Cir. 1934); *Texas Co.* v. *Globe Oil & Refining Co.*, 112 F. Supp. 455 (N. D. Ill. E. D. 1953).

8. Plaintiff is entitled to an accounting of the actual

damages sustained by plaintiff and plaintiff's predecessor, Armstrong, as a result of the infringing manufacture and sale by Motorola of FM apparatus. All matters relating to patent marking and other notice of infringement and to the award of costs, attorneys' fees and interest are reserved for hearing at such accounting and for determination by this Court after such accounting shall be had.

Memorandum Accompanying Findings of Fact and Conclusions of Law.

In view of the extraordinary comprehensive Report, Court's Exhibit 1, for identification, submitted before trial by the Expert, Dean George R. Town, appointed upon agreement of counsel, and the very detailed findings covering the mass of evidence, which findings of fact and conclusions of law are filed herewith, a separate opinion on the merits would be superfluous and repetitious. Furthermore, many of the points here made were covered in the extended opinion of Judge Edmund L. Palmieri in *Armstrong* v. *Emerson Radio and Phonograph Corporation*, 179 F. Supp. 95 (S. D. N. Y. 1959), involving the same patents and claims as are here in suit. This Court is also in accord with Judge Palmieri's decision that there was no misuse of the '069 patent or the other patents in suit and that the Reissue was lawfully reissued. The Court wishes, however, to record its appreciation for the expert assistance rendered by Dean Town to the Court.

APPENDIX C.

STATUTORY PROVISIONS.

1. Sections 112, 251 and 271(a) of the Patent Code of 1952 [35 U. S. C. §§ 112, 251, 271(a)] provide:

§ 112. *Specification.*

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

§ 251. *Reissue of defective patents.*

Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the Commissioner shall,

on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent. No new matter shall be introduced into the application for reissue.

The Commissioner may issue several reissued patents for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such reissued patents.

The provisions of this title relating to applications for patent shall be applicable to applications for reissue of a patent, except that application for reissue may be made and sworn to by the assignee of the entire interest if the application does not seek to enlarge the scope of the claims of the original patent.

No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

§ 271. *Infringement of patent.*

(a) Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.

2. Sections 33, and 64 of the predecessor statutes to Sections 112, and 251 respectively (35 U. S. C. § 33; R. S. 4888; and § 64; R. S. 4916) provide:

§ 33; R. S. 4888. *Application for patent; description; specification and claim.*

Before any inventor or discoverer shall receive a patent for his invention or discovery he shall make application therefor, in writing, to the Commissioner of Patents, and

shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery. The specification and claim shall be signed by the inventor. No plant patent shall be declared invalid on the ground of noncompliance with this section if the description is made as complete as is reasonably possible.

§ 64; R. S. 4916. *Reissue of defective patents.*

Whenever any patent is wholly or partly inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the commissioner shall, on the surrender of such patent and the payment of the duty required by law, cause a patent for the same invention, and in accordance with the corrected specification, to be reissued to the patentee or to his assigns or legal representatives, for the unexpired part of the term of the original patent. Such surrender shall take effect upon the issue of the reissued patent, but in so far as the claims of the original and reissued patents are identical, such surrender shall not affect any action then pending nor abate any cause of action then existing, and the reissued patent to the extent that its claims are identical with the

original patent shall constitute a continuation hereof and have effect continuously from the date of the original patent. The commissioner may, in his discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such reissued letters patent. The specifications and claims in every such case shall be subject to revision and restriction in the same manner as original applications are. Every patent so reissued, together with the corrected specifications, shall have the same effect and operation in law, on the trial of all actions for causes thereafter arising, as if the same had been originally filed in such corrected form; but no new matter shall be introduced into the specification, nor in case of a machine patent shall the model or drawings be amended, except each by the other; but when there is neither model nor drawing, amendments may be made upon proof satisfactory to the commissioner that such new matter or amendment was a part of the original invention, and was omitted from the specification by inadvertence, accident, or mistake, as aforesaid.

APPENDIX D.

CLAIMS 1 AND 2 OF PATENT NO. 1,941,069.

1. The [method of eliminating in radio signaling disturbances having the nature of a spectrum,]

(a) which consists in producing a variation in frequency of the wave to be transmitted substantially greater in extent than the frequency range of good audibility, transmitting such wave,

(b) receiving the wave and amplifying the received currents, substantially eliminating amplitude variations so as to minimize the noise caused by the amplitude variations due to the disturbances, translating the frequency variations of the received signal into amplitude variations by a selective system which is fully responsive to the wide variations of the signal, but substantially not responsive to the lesser variations in frequency of the spectrum of the disturbances to be eliminated.

2. A [system for eliminating in radio signaling disturbances having the nature of a spectrum,]

(a) comprising means at the transmitter for producing a variation in frequency of the wave to be transmitted, substantially greater in extent than the frequency range of good audibility,

(b) means at the receiver for amplifying the received currents, current limiting means for substantially eliminating amplitude variations, and a detector system for translating the frequency variations of the received signal into amplitude variations, said system being fully responsive to the wide variations of the signal but substantially not responsive to the lesser variations in frequency of the spectrum of the disturbances to be eliminated nor to variations in amplitude of said disturbances.

CLAIMS 1, 2, 4 AND 6 OF REISSUE PATENT NO. 21,660.

1. The [method of transmitting and reproducing] a band of signaling frequencies

6. The [method of reproducing] the signaling frequencies of a wide swing frequency

(a) which consists in amplifying the high frequencies of the band to a substantially greater degree than the low frequencies thereof, varying the frequency of the wave to be transmitted by the amplified currents to produce a wide band of frequency variations, transmitting such wave,

(b) receiving the wave and amplifying the received currents, passing the amplified currents through a detecting device having an admittance band substantially wider than said wide band of frequency variations and translating in the detecting device the frequency variations into a band of currents of variable amplitude whereby distortions which arise in the translation in the detecting device of the frequency variations into currents of variable amplitude are minimized, and amplifying the low frequency currents of said band to a substantially greater degree than the high frequency currents thereof.

2. In a [system for transmitting and reproducing] a band of signaling currents, in combination,

(a) means arranged to amplify the high frequency currents of the band to a substantially greater degree than the low frequency currents thereof, means for generating a carrier modulated wave predistorted in such manner that the ratio of the deviations of the wave to the amplitudes of the corresponding signaling currents is greater for the higher frequencies of the signaling currents than for the lower frequencies thereof,

[which method] consists in receiving the wave and amplifying the received currents, passing the amplified currents through a detecting device having an admittance band substantially wider than the width of the wide swing of the said wave and translating in the detecting device the frequency variations into signaling currents of variable amplitude, whereby distortions which arise in the translation in the detecting device of the frequency variations into currents of variable amplitude are minimized, and amplifying the signaling currents of the lower frequencies to a substantially greater degree than the signaling currents of the higher frequencies.

4. A [receiver] adapted to receive a wide swing frequency modulated wave predistorted in such manner that the ratio of the deviations of the wave to the amplitudes of the corresponding signaling currents is greater for the higher frequencies of the signaling currents than for the lower frequencies thereof,

wave of substantially constant frequency, means for causing the amplified currents to vary over a wide range the frequency of the carrier wave, means for transmitting such wave,

(b) means for receiving the wave and amplifying the received currents, means coupled to said last-named means for converting the frequency variations into a band of currents of variable amplitude and having an admittance band width substantially greater than the width of the said wide range of carrier frequencies, a detecting device coupled to said converting means for deriving the band of modulation currents, and amplifying means coupled to the detecting device arranged to amplify the low frequency currents of the band to a substantially greater degree than the high frequency currents thereof to reproduce the signaling currents whereby distortions which arise in the translation in the converting means of the frequency variations into currents of variable amplitude are minimized.

said [receiver] comprising means for receiving the wave and amplifying the received currents, converting means coupled to said last-named means for causing the frequency variations to create currents of variable amplitude and having an admittance band width substantially greater than the width of the wide swing of said wave, a detecting device coupled to said converting means for deriving the signaling currents therefrom, and amplifying means coupled to the detecting device arranged to amplify the signaling currents of the lower frequencies to a substantially greater degree than the signaling currents of the higher frequencies.

SUPREME COURT, U. S.

FILED

AUG 15 1967

JOHN F. DAVIS, CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM 1967

No. 395

MOTOROLA, INC.

Petitioner,

vs.

ESTHER MARION ARMSTRONG, Executrix,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

BRIEF FOR RESPONDENT IN OPPOSITION

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ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

BRIEF FOR RESPONDENT IN OPPOSITION

There are no special or important reasons why the writ prayed for in this case should be granted.

This is a patent infringement suit under three patents that have long since expired. The last of the patent licenses referred to in the petition terminated ten years ago with the expiration of the last of the three patents in suit. There is no other pending litigation involving such patents or licenses. There is no conflict among the decisions of the federal courts on any factual issue or question of law that has been decided in this case. There is presented here no important question of federal law which has not been, but should be, settled by this Court.

OPINIONS BELOW

In addition to the opinions referred to in the petition, there is the opinion in the companion case, *Armstrong* v. *Emerson Radio and Phonograph Corp.* (SD NY 1959), 179 F. Supp. 95, involving the same patents and the same issues of infringement and enforceability and reaching the same conclusions.

QUESTIONS PRESENTED

The three questions presented in the petition for certiorari are not expressed in the terms and circumstances of the case and do not fairly state questions that are raised in the record or by the decision of the Court of Appeals.

Question 1 ignores material facts and, as stated, suggests an issue that is not presented by the record. In the terms and circumstances of the case, the question is: Whether a patent owner, who granted non-exclusive, royalty-bearing licenses for the complete use of his patented inventions and to the full extent of the commercial requirements of his licensees, was justified in including in such licenses an immunity under system patents in respect of the sale of equipment manufactured by his licensees when the courts have subsequently held that the sale of such equipment, in the absence of such immunity, would constitute contributory infringement of the licensor's system patents.

Question 2 purports to state a question under the statutory provisions relating to the reissue of defective patents. As stated, the question is not governed by such statutory provisions. The statutory provisions relating to reissue of defective patents are not concerned with the distinctions between direct infringement and contributory infringement or with whether a sub-combination of a patented combina-

tion may be separately claimed. In accordance with established law on patent reissue, the question presented on the record is: Whether the reissue patent in suit was validly reissued for the invention that was intended to be protected and secured by the original patent and whether the holding by the Court of Appeals, in the affirmative, was in conformity with the principles enunciated by this Court in *U. S. Industrial Chemicals, Inc.* v. *Carbide and Carbon Corp.* (1942), 315 U. S. 668.

Question 3 states a question of construction of 35 U. S. C. § 271(a), but, in doing so, misinterprets the decision by the Court of Appeals. The question decided by the Court of Appeals is: Whether, within the purview of 35 U. S. C. § 271(a) and the predecessor authorities, a system patent can be infringed by the use of the patented system only if all of the constituent parts, when assembled for use, are owned and operated by the same person or corporate entity.

STATUTES INVOLVED

This case involves, in addition to the statutory provisions set forth in the petition, Section 271(d) of the Patent Act of 1952 [35 U. S. C. § 271(d)], which provides:

> "(d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute

contributory infringement of the patent; (3) sought to enforce his patent rights against infringement or contributory infringement."

STATEMENT OF THE CASE

This case concerns the discoveries of Edwin H. Armstrong that have resulted in the system of radio popularly known as FM.

The Court of Appeals and District Court have held (1) that the three Armstrong FM patents litigated at the trial were valid and infringed by petitioner (herein referred to as Motorola); and (2) that Armstrong did not misuse his FM patents by granting licenses and collecting royalties for the use of his FM inventions.

The three patents that have been sustained below are patent No. 1,941,069 issued December 26, 1933, covering the wide band FM system (hereinafter referred to as patent '069); patent No. 1,941,066 issued December 26, 1933, covering the synchronous heterodyne method for frequency modulation reception (hereinafter referred to as patent '066), and Reissue No. 21,660 issued December 17, 1940, on a reissue application filed October 21, 1940, (original application filed February 19, 1940, and issued September 17, 1940), covering a preemphasis and deemphasis system for use in FM broadcast services (hereinafter referred to as reissue '660).

In its petition, Motorola has not described Armstrong's FM inventions, nor referred to their significance and impact in the radio industry. Furthermore, Motorola has not referred to Armstrong's completely open licensing policy and has not properly described Armstrong's practice of granting licenses on open and uniform terms in all fields of radio where his inventions were employed. Those facts, as found

by the courts below on uncontradicted evidence, are essential to an understanding and proper assessment of the questions presented in the petition. We summarize such facts here:

The Invention of Armstrong Patent No. 1,941,069

The Court of Appeals and the District Court have found that Armstrong patent '069 disclosed and claimed the wide band FM system by which noise is suppressed in radio signaling (Petition, 7a-8a, 11a-12a; DA 45-49)*.

The teaching of Armstrong concerning the wide band FM system was contrary to earlier practice and theory both as to the results obtained in the suppression of noise and the method whereby such results were obtained (F 11-12, DA 44; DA 2685-2686). The emergence of the wide band FM system was a development which profoundly influenced the radio art (F 13, DA 44; DA 2685-2686, 2328).

When Armstrong patent '069 issued on December 26, 1933, FM broadcasting was not in existence and there was no use of frequency modulation for any commercial purpose. Frequency modulation as a theoretical possibility for impressing a signal on a radio wave by varying its frequency had been known from the earliest days of radio, but the academic consensus was adverse to frequency modulation; the radio art had passed it by and there was no practical use of it (F 35-37, 43, DA 47-48).

In patent '069, Armstrong disclosed how noise could be suppressed in radio signaling and in his new art he animated the discarded method of frequency modulation and made

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*References herein to the Appendix to Brief for Defendant-Appellant in the Court of Appeals are indicated by "DA" and to the Appendix to Brief for Plaintiff-Appellee, one volume, by "PA". The findings of the District Court are indicated by "F". The findings are printed at DA 42-83 and reported at 230 F. Supp. 337, 339-379.

use of it in a particular way (F 23-33, DA 45-47). The system was unique in that both the transmitter and receiver were built for operation in a bandwidth* that was several times greater than the bandwidth that had theretofore been conventional in radio signaling (F 18, DA 45; Petition, 7a-8a, 11a-12a). It involved producing a particular wave at the transmitter, called a wide swing wave, and receiving that particular wave with a wide band receiver; the receiver had wide selective circuits to discriminate between the wide frequency swings of the signaling wave and the lesser frequency variations due to interfering signals and disturbances in the receiver (F 24, DA 45). Thus, the transmitter and receiver were complementary instruments for the practice of a novel method of noise reduction. Each of them, and both together, functioned in a manner that was contrary to the teachings of the prior art. The two claims of patent '069 pointed to the system as a whole and the novel method which it employed. The patent disclosed a working example of the invention and disclosed the principle and the essential characteristics of the whole system and of its constituent parts (Petition 7a-8a; Pl. Ex. 13, DA 114, 3420-3421).

In May, 1940, the Federal Communications Commission, in referring to the wideband FM system of patent '069 that had been disclosed to it by Armstrong, and in deciding that such FM system would be employed in a new radio service for the public, stated

> ". . . The Commission believes that this is one of the most significant advances that has been made in aural broadcasting in recent years." (F 212, DA 65).

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*The bandwidth of a radio circuit refers to the range or band of frequencies to which the circuit is substantially responsive or which can be passed by the circuit. Normally, a circuit is said to be tuned to the frequency midway in the bandwidth.

The Court of Appeals, affirming the District Court, held that Motorola had infringed patent '069 and described how Motorola had applied the wide band FM system in its receivers for FM broadcasting and television sound broadcasting and in its transmitters and receivers for FM communication equipment (Petition, 11a-14a).

The Invention of Armstrong Reissue Patent No. 21,660

In the late '30s, Armstrong discovered that he could further suppress the effects of noise in the wide band FM receiver and improve the faithfulness of reproduction of sound signals for the broadcast services by selectively suppressing the high pitched noise or "hiss" in the audio circuits of the receiver and by predistorting the sound at his wide band transmitter to compensate for the selective effect of the receiver audio circuits on the signaling frequencies. Armstrong discovered that he must design his receiver to have what is called a wide admittance band or a discriminator circuit substantially wider than the wide range of swing of the signaling wave (F 135-144, DA 56-57). He devised a particular kind of distortion of the frequency modulated wave that later was adopted by the Federal Communications Commission for standard use in the FM broadcast services (F 149, DA 57-58).

Armstrong's preemphasis and deemphasis invention is disclosed in Reissue '660 (F 135-144, DA 56-57) and it is universally employed for transmission and reception in FM broadcasting and television sound broadcasting (F 149, DA 57).

The Invention of Armstrong Patent No. 1,941,066

Several years before the discovery of the wide band FM system, Armstrong had discovered a basic method for receiving frequency modulated waves which was referred to

by the Court of Appeals as a pioneer invention (Petition, 9a). That invention, referred to by the courts below as a synchronous heterodyne, was disclosed in patent '066 (F 96-98, DA 52).

As stated by the Court of Appeals, the inventive concept involved heterodyning or combining the received FM wave with itself to reproduce the signal (Petition 8a). In the receiver, there were circuits which would pass the received radio wave along two separate paths, the wave in each path containing all of the variations in frequency occurring in the received signal (F 97-98, 111, DA 52, 54). The radio wave in one of such paths was modified in accordance with the frequency variations in the signal and was thereafter combined at the detector with the radio wave from the other path that was synchronously varying in frequency, to reproduce the signal (DA 2699-2701).

The synchronous heterodyne receiving method has been in universal use in FM broadcast receivers and television receivers, and, as the courts below have found, Motorola has employed it in all of its receivers, including its FM communication receivers (Petition, 8a-9a; F. 290-293, DA 76).*

Armstrong's FM Licenses

Edwin H. Armstrong was an Electrical Engineer whose life was devoted to research and invention in the field of radio communication. A member of the faculty of Columbia

*In its petition, Motorola states that it does not seek certiorari with respect to the decisions below on patent '066 (Petition, p. 4). However, in assessing Motorola's certiorari contentions against Armstrong's licenses under patent '069 and reissue '660, it should not be overlooked that patent '066 was a receiver patent and provided an independent basis for Armstrong's collection of royalties in respect of the manufacture and sale of FM receivers. Likewise, Armstrong patent No. 1,941,068 (not prosecuted in the litigation) was a transmitter patent, covering circuits for producing a frequency modulated wave that have been embodied in FM broadcast transmitters, and provided an independent basis for licensing such transmitter for a royalty.

University as Professor of Electrical Engineering, he received world-wide recognition for having made a number of fundamental contributions of an inventive character in the radio field, including FM.

Armstrong was never engaged in any manufacturing business and was never employed by any business corporation. Armstrong never attempted by means of his FM inventions to obtain control over any field of manufacture, sale or use of FM equipment covered by his patents or of any other radio equipment or devices. Armstrong derived revenues from his FM inventions solely by granting licenses under his FM patents.

Armstrong's first FM license was granted to General Electric Company in 1939 (Pl. Ex. 15, DA 116, 3511 and 3517). In the ensuing years, Armstrong established a uniform licensing system under his FM patents open to all manufacturers and commercial users of FM apparatus on non-discriminatory terms. Armstrong had four principal types of licensees under his FM patents: (1) Manufacturers of FM broadcast receivers and television receivers; (2) Broadcasters who operated an FM broadcast transmitter; (3) Manufacturers of two-way communication apparatus and other commercial communication apparatus; and (4) Companies engaged in public service communication for toll (F 225-232, DA 67-68).

In Armstrong's licenses, a royalty was payable by the licensee in respect of FM apparatus that embodied his patented FM inventions or had been designed and manufactured by the use of his FM inventions (Pl. Ex. 15, DA 116, 3622 and Pl. Ex. 16, DA 116, 3724). The terms of his licenses had been negotiated between Armstrong and his licensees in the various fields of use. There is no evidence that any licensee or negotiator for a license ever requested a license limited to particular FM patents owned by Arm-

strong or ever requested anything less than immunity under all of Armstrong's FM patents.*

The existence of four separate forms of license was due to the different kinds of business in which radio manufacturers and commercial users happened to be engaged and the resultant different methods of computing royalty that were appropriate in such different kinds of business. If a manufacturer happened to be engaged in more than one of such kinds of business, it could obtain a separate license from Armstrong for each of such kinds of business in which it was engaged, and several of the licensees actually held more than one form of Armstrong license (F 228-232, DA 67-68). Moreover, in 1940, Armstrong offered licenses to Motorola both for FM home receivers and for FM mobile communication equipment (F 317, DA 79).

Armstrong granted no exclusive license to anyone for any purpose. Armstrong never refused a license for the use of any of his FM inventions to anyone for any purpose. This case does not present the situation where patent licenses were employed for regulating who might be engaged in any line of trade, or where licensees were protected from competition by the grant of exclusive licenses, of a limited number of licenses or by division of fields of use among such licensees. Compare *General Talking Pictures Corporation* v. *Western Electric Company, Inc.* (1938), 304 U. S. 175, 183-190.

REASONS FOR DENYING THE WRIT

Armstrong's FM patents have been sustained and held to be infringed by Motorola. The judgment provides that there shall be an accounting for damages by reason of

*In addition to the commercial royalty-bearing licenses, Armstrong also licensed the United States Government. During World War II and for the duration of the national emergency, Armstrong waived all royalties under his FM patents with respect to FM apparatus manufactured for the United States for military purposes (Petition, 4a).

infringement of receiver patent '066 and system patent '069 which expired on December 26, 1950 and by reason of infringement of reissue '660, containing both system and receiver claims, which expired on September 17, 1957 (DA 86-87).

The decision by the Court of Appeals that Motorola directly infringed the system claims of patent '069 and reissue '660 when it tuned in and listened to FM broadcasts in the course of the design and manufacture of its wide band FM receivers is in full accord with the basic principles of infringement law and the authorities. There is nothing in this case that calls for any limitation upon or reexamination of such basic principles and authorities. On the contrary, it has long been established in this Court and in other federal courts that inventions of great merit will be accorded a liberality of construction and protection commensurate with their true scope and with their advance in science and the useful arts. (See authorities cited by the District Court, Petition 21a). It is manifest from the record that Armstrong's FM inventions were of the highest order and in the classic line of great inventions. They were deserving of protection against a manufacturer who made complete use of them for commercial purposes and refused to pay a reasonable royalty to the inventor. Motorola was properly held liable (1) as a direct infringer of the system claims of patent '069 and reissue '660 when it used its FM receivers and (2) as a contributory infringer when it sold its FM receivers.

Armstrong's FM licenses were also in the classic line. They were not a scheme for collecting double royalties or for the levy of royalty on unpatented equipment. Actually, Armstrong's licenses are an outstanding example of how an independent inventor succeeded in having his inventions adopted throughout a gigantic industry and succeeded in

establishing an open and uniform licensing system in the various fields of radio where his inventions were employed without trade-restraining or anti-competitive consequences of any kind. None of the patent misuse and anti-trust decisions by this Court, including those cited in the petition, was intended to apply to the affairs of an inventor, not engaged in any manufacturing business, who licensed his patents and brought suit against infringers for the sole purpose of securing a reasonable royalty from those who were making commercial use of his patented inventions.

The Court of Appeals and the District Court did not err in deciding that Armstrong's reissue patent '660 was properly and validly reissued. The reissue was allowed in order to protect the invention that was intended to be covered and secured by the original patent and such reissue was in precise accord with the law as enunciated by this Court in *U. S. Industrial Chemicals, Inc.* v. *Carbide and Carbon Chemicals Corp.* (1942), 315 U. S. 668.

ARGUMENT

I. The Armstrong Licenses Provided for the Complete Use of Armstrong's Patented Inventions to the Full Extent of the Commercial Requirements of His Licensees and Did Not Improperly Provide for the Payment of Royalties on Unpatented Equipment.

By his broadcast transmitter licenses, Armstrong granted to the broadcaster the right to employ any and all of his FM inventions in their entirety in the construction, operation and monitoring of an FM broadcast transmitter (Pl. Ex. 14, DA 114-115, 3506-3508). Such FM inventions included (1) the transmitter circuit for producing a frequency modulated wave covered by Armstrong patent No. 1,941,068 and embodied in FM broadcast transmitters (F 28, DA 46); (2) the synchronous heterodyne FM

receiver covered by patent '066 and employed by the broadcaster in monitoring his FM transmission; and (3) the wide band FM and preemphasis inventions covered by patent '069 and reissue '660 in accordance with which the broadcast transmitter was built and adapted to operate. In return for the right to use such FM inventions in connection with his broadcasting operations, the broadcaster paid Armstrong a small lump sum royalty in an amount depending upon the operating power of his transmitter (F. 229, DA 68).

Contrary to the repeated statements in the petition, the broadcaster was not "restricted to the use of one of the unpatented elements of a claimed combination" and Armstrong did not withhold from the broadcaster all rights with respect to other elements of any "claimed combination" (Petition, pp. 6-14). Actually, the broadcaster was authorized to employ Armstrong's FM inventions in their entirety in the conduct of his broadcasting operations which was the business in which he happened to be engaged and for which he took the Armstrong license.

As for the receiver manufacturers, the Armstrong licenses provided that such manufacturer might make FM receivers for home use embodying any of Armstrong's FM receiver inventions (e.g., the synchronous heterodyne invention of patent '066 which has been in universal use for FM broadcast receivers) and that the manufacturer might also employ Armstrong's FM system inventions in the design, manufacture and testing of such receivers (Pl. Ex. 15, DA 116, 3640-3641)*. In return for such unrestricted right

*The use of the wide band FM system was essential in the design and manufacture of wide band FM receivers. As Armstrong wrote to Motorola on December 15, 1948, when he sent a notice of infringement (Pl. Ex. 13, DA 114, 3421):

> "There is one thing about which I am quite sure: No manufacturer can make and sell an FM receiver without first

to employ Armstrong's patented teaching, the manufacturer was to pay Armstrong a royalty in the amount of 2½% of the adjusted selling price of its licensed FM receivers (Pl. Ex. 15, DA 116, 3641-3643). Here again, the manufacturer was licensed to employ Armstrong's FM inventions in their entirety in connection with its home receiver manufacturing operations which was the business in which it was engaged and for which the manufacturer had thought it desirable to have an Armstrong license.

The repeated contention in the petition that Armstrong licensed only unpatented parts of his FM inventions to different manufacturers and users and refused to license the use of his FM inventions in their entirety is wrong and is belied by the express terms of the Armstrong licenses and by the business realities in the radio industry. Furthermore, the contention in the petition that there was a duplication of royalties as between licensed FM broadcasters and licensed receiver manufacturers simply ignores the fact that each of such classes of licensees was independently employing the Armstrong FM inventions in a different business and for its own commercial purposes in such business.*

The Armstrong receiver licenses also included a license or immunity under Armstrong's system patents in respect of the sale of FM receivers by the manufacturer-licensee. The Court of Appeals held that the sale of such FM re-

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determining whether it will work, and in order to determine whether it will work he must utilize a transmitter and receiver, working together, according to the method and the teachings of Patent No. 1,941,069."

*The petition does not challenge Armstrong's licenses for mobile and two-way communication (Petition, p. 5). Yet those licenses provided for royalties in respect for both transmitters and receivers (Pl. Ex. 16, DA 116, 3722-3725). If such "double royalties" were proper in the field of mobile communications, why were they improper in the broadcast field, as asserted in the petition? Motorola gives no explanation for such discrepancy in its position.

ceivers, unless authorized, constituted contributory infringement of the system patents (patent '069 and system claims 1 and 2 of reissue '660). The petition does not challenge such holding of contributory infringement if the Court of Appeals was correct in its holding that the system patents were directly infringed when Motorola and other users of its receivers put such FM receivers into use (Petition, p. 5). However, the holding on contributory infringement vitiates Motorola's contention of patent misuse. The propriety and legality of Armstrong's licenses, in so far as they included a license under the system patents and provision for deriving revenue in respect of the sale of such FM receivers, were explicitly confirmed by 35 U. S. C. § 271(d), supra, page 3. Armstrong could not conceivably have done anything wrong by including in his licenses an immunity under his system patents when the courts have held that the manufacture and sale of FM receivers, unless licensed, constituted direct and contributory infringement of the system patents.

Motorola did not plead misuse at all until after the trial and more than six years after its answer was filed (DA 39-40). In its amendment to the answer after the trial, Motorola pleaded in substance that Armstrong had misused patent '069 by including it in his license to broadcast receiver manufacturers. In other words, Motorola belatedly pleaded that Armstrong had no right to license patent '069 in the broadcast field. That defense was explicitly rejected by the Court of Appeals (Petition, 16a). At no time did Motorola assert below that Armstrong's licenses restricted the licensee to the manufacture, use and sale of unpatented elements or that the licenses were an improper scheme to multiply sources of royalty or to exact double royalties for the use of his inventions.

Authorities Cited in the Petition Have No Bearing on This Case.

Motorola cites the *Mercoid* cases, 320 U. S. 661 and 320 U. S. 680. But those cases are not in point. In *Mercoid*, the mischief which this Court struck down was that the Cross patent had been employed to restrain and interfere with the market in an unpatented appliance. There is no such question here. The controversy here has been simply whether Motorola was entitled to use Armstrong's patented inventions in its manufacturing business and to embody his patented teachings in its receivers without paying a reasonable royalty to Armstrong.

We asserted below that what was said in *Mercoid* about the general nature of the patent grant must be read in the context of the holding by this Court that there had been a misuse of the Cross patent by attempting to wield it as a weapon to regulate and control who might be engaged in the manufacture and sale of certain unpatented appliances. In *Mercoid*, this Court remanded the case to determine whether, in addition to misuse of patents, there had been a violation of the anti-trust laws. But here, there is no anti-trust question whatsoever.

United States v. *Masonite Corp.* (1942), 316 U. S. 265, cited in the petition (pp. 13-14), was an anti-trust case involving price-fixing agreements with competitors that were held not to be justified by patents relating to the price-fixed products. This Court pointed out (page 280) that the case was to be distinguished from situations such as presented here "where the purpose and effect of the marketing plan [here, open non-exclusive licenses without any market-regulating or price-fixing] was to secure to the patentee only a reward for his invention."

Motorola has also cited *Aro Mfg. Co.* v. *Convertible Top Co.* (1961), 365 U. S. 336, and quoted language, out of con-

text, concerning the general nature of the patent grant (Petition, pp. 12-13). In the *Aro* case, the question before this Court involved the distinction between "repair" and "reconstruction" of a patented combination. In *Aro*, this Court held that the supply by Aro of fabric coverings to replace worn out fabrics in a patented convertible top for automobiles constituted a "repair" and not a "reconstruction" of the patented combination. There is no such question here. Motorola was manufacturing orginial equipment (FM receivers) for the wide band FM system and was not engaged in either repair or reconstruction.

In rejecting Motorola's contentions based on the first *Aro* case, the District Court put the matter as follows (PA4a):

> "It is therefore evident that the Supreme Court was not depriving a patentee, an inventor of a combination of unpatented elements, from protecting that monopoly from original infringement by a plurality of persons severally manufacturing the component parts going to constitute the whole patented combination. It was solely passing upon the liability of one making a constituent unpatented replacement part, requisite to the continued functioning of the original patented combination."

In the second *Aro* case, 377 U. S. 476 (1964), an underlying problem that was reflected in the opinions was whether the owner of a patent who had licensed or settled with the large companies who were the primary infringers of its patent should be permitted to collect additional damages from the small suppliers of replacement parts.* There

*This Court held that Aro, a supplier of replacement parts, was liable as a contributory infringer when it supplied fabric coverings for repair of Ford's original convertible tops that were infringing and not licensed, 377 U. S. 476, 482-493. This Court went on to point out that in view of the subsequent settlement between plaintiff and the

is no such problem here. Armstrong did not seek royalties or damages from the suppliers of replacement parts for FM broadcast receivers or transmitters. Motorola and other receiver manufacturers in the broadcast field from whom Armstrong did expect to receive royalties have directly utilized the teachings of Armstrong's FM patents and built his FM inventions into their receivers. Those manufacturers have supplied the original equipment to the public whereby the wide band FM system has come into widespread use. Those manufacturers were primarily and directly responsible for paying a reasonable royalty to Armstrong for the use of his FM inventions and that is the right—and the only right—that plaintiff seeks to vindicate in this action.

We point out that the home users of Motorola FM receivers did not have to know anything at all about Armstrong's patented inventions and did not have to adjust their receivers in any particular way in order to secure the benefits of Armstrong's teaching because Motorola had employed Armstrong's inventions in manufacturing the receivers and had built his inventions into the receivers. Armstrong did not assert his patent against home users or against radio distributors, retailers or servicing agencies. Armstrong's policy in licensing receiver manufacturers was designed to secure a reasonable compensation for the use of his inventions from those who were making direct commercial use of his inventions in manufacturing and supplying for distribution to the public the original equipment whereby his inventions came into widespread use. Compare *Aro Mfg. Co.* v. *Convertible* Top Co., 377 U. S. 476, 502-513 and 523-531.

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primary infringer, Ford Motor Company, damages from Aro, the contributory infringer, might be only nominal. The case was remanded for an accounting of damages where it would be determined on evidence whether the Ford settlement had provided for *full* payment to the patent owner for the use of its patented invention in Ford cars.

2. The Reissue Patent No. 21,660 Was Validly Reissued

Motorola contends that the Court of Appeals erred in holding that reissue '660 was for the same invention as was in the original patent and that the decision of the Court of Appeals is in conflict with *U. S. Industrial Chemicals Co.* v. *Carbide and Carbon Chemicals Corp.* (1942), 315 U. S. 668. On the uncontradicted facts of record, the petitioner's contention is manifestly erroneous.

In reissue '660, the receiver claims added by reissue cover the structure and operation of a wideband FM receiver with deemphasis circuits and a wide admittance band, precisely as such structure and operation of the receiver were included in the system claims of the original patent (F 166, DA 59). The Court of Appeals pointed out that the only change in the specification of reissue '660 as compared with original patent No. 2,215,284 was the correction of a palpable and minor error in language in the original specification (Petition, 10a). The Court of Appeals further pointed out that the only difference between the system claims in the original patent and the receiver claims added by reissue was that the claims in the original patent referred to a transmitter and receiver in combination, whereas the claims added by reissue were directed to a receiver for receiving a wave that had been predistorted at a transmitter as provided in the claims of the original patent. As the Court of Appeals stated:

> ". . . Here the receiver claims specify that the receiver be adapted for reception of a preemphasized wave, but such wave would be produced only by a transmitter operated as disclosed in the original patent." (Petition, 11a)

The Court of Appeals held that the receiver claims of reissue '660 were not for a different invention than was disclosed and claimed in the original patent.

It is manifest that the receiver claims of reissue '660 relate to the invention that was intended to be protected and secured by the original patent. It was always Armstrong's intent that the original patent and its system claims would protect him in connection with the manufacture and sale of wide band FM receivers embodying deemphasis circuits and a wide admittance band, precisely as disclosed in the original patent and as receiver manufacturers later manufactured and sold such receivers. Armstrong's intent in that regard is manifest from the legalistic nature of the changes that were made in the reissue patent and is confirmed by plaintiff's charge of infringement and by the holdings of the courts below on infringement. Plaintiff charged and the courts below have held that Motorola infringed system claims 1 and 2 of the original patent by its manufacture and sale of television sound receivers and FM broadcast receivers. The receiver claims added by reissue, also held to have been infringed by Motorola, do not add or change anything with respect to physical structure or operation of the receivers or with respect to the preemphasis and deemphasis system in which such receivers are employed. Indeed, the FM receivers covered by the receiver claims of the reissue '660 patent have utility and function in the suppression of noise and avoidance of distortion as disclosed in the original patent only when a preemphasized transmitter, operating as disclosed in the original patent, provides a preemphasized wave for reception by such receivers.

The Principles of the *U. S. Industrial Chemicals* Case Were Properly Applied

The reissuance of Armstrong's original patent No. 2,215,284 on December 17, 1940, within three months of the issuance of the original patent, was in full accord with the law as enunciated by this Court in *U. S. Industrial Chemicals,* 315 U. S. 668. The statutory requirement as interpreted by this Court in that case, pp. 675-676, and quoted in the petition, p. 16, is as follows:

> "The question is whether, in the light of the disclosures contained in the two patents, they are for the same invention. This court has said that they are if the reissue fully describes and claims the very invention intended to be secured by the original patent; if the reissue describes and claims only those things which were embraced in the invention intended to have been secured by the original patent; if the broader claims in the reissue are not merely suggested or indicated in the original specification but constitute parts or portions of the invention which were intended or sought to be covered or secured by the original patent. * * * * * And it is not enough that an invention might have been claimed in the original patent because it was suggested or indicated in the specification. It must appear from the face of the instrument that what is covered by the reissue was intended to have been covered and secured by the original."

In *U. S. Industrial Chemicals,* this Court held the Lefort reissue patent there at bar to be invalid because the claims of the Lefort reissue patent were found to cover a chemical process for the manufacture of ethylene oxide which was not in accordance with the teaching in Lefort's original

patent and which was not intended to be protected or secured by the claims of the original patent. Lefort's original patent had taught that the addition of water was an essential step in the catalytic reaction process therein described. Lefort's reissue patent disclosed that the addition of water was immaterial in such reaction process and the claims of Lefort's reissue patent omitted any reference to the addition of water in the reaction process. On the basis of the difference in chemical teaching between the original and reissue patents, this Court held that the Lefort reissue claims would cover a catalytic reaction process that had not been disclosed in the original patent and which the patentee had not intended to protect and secure by the original patent.

That is not the situation here. It is true that the receiver claims of Armstrong reissue '660 do not explicitly call for a preemphasized transmitter, but they call for such transmitter by necessary implication. The receiver claims call for a receiver adapted to receive a preemphasized wave but such preemphasized wave could be produced only by a preemphasized transmitter constructed and operated as disclosed in the original patent (Petition, 28a-30a). Contrary to the situation in *U. S. Industrial Chemicals,* there was no change in inventive teaching in Armstrong's reissue '660 and there was no teaching that a step, disclosed in the original patent as necessary to practice of the invention of preemphasis and deemphasis, might be omitted. The sole consequence of the receiver claims added by reissue was that the sale of deemphasized wide band FM receivers with wide admittance band constituted direct infringement of such receiver claims, whereas the sale of such receivers constituted contributory infringement of the system claims in the original patent.

Motorola's contentions against reissue '660 are rooted in semantics, but the words of Armstrong's original and reissue patents provide no support for its contentions.

3. Motorola Directly Infringed Patent No. 1,941,069 and Claims 1 and 2 of Reissue Patent No. 21,660 When It Tested Its Receivers in the Course of Their Design and Manufacture.

The Court of Appeals held that Motorola directly infringed the system claims of patent '069 and reissue '660 when, without authorization, it tuned in its wide band FM receivers and tested them by listening to wide swing FM broadcasts. The Court of Appeals stated (Petition, 13a):

> ". . . Here Motorola tested its receivers by tuning them to transmitters employing the Armstrong FM teachings. This constituted a 'use' of the system patent because the radio waves generated by the Armstrong transmitters were received and converted into sound by the Motorola receivers. * * * Section 271(a) of the Patent Act does not require ownership of the system before infringement can occur. The test under the Act is whether there has been use of the system. As shown, such use occurred when Motorola tested these receivers."

The petition comments on this holding by the Court of Appeals as follows (Petition, p. 20):

> "The core of the Court of Appeals opinion, quoted above, is that a use of the broadcasted wave in a receiver is the same as a use of the transmitter. The opinion necessarily construes the words 'patented invention' in § 271(a) as being broad enough to include more than the alleged invention stated in the combination claims in issue here. Each claim states that the 'invention' is a combination of a transmitter and a receiver. The opinion says, in effect, that the 'patented invention' also consists of doing

> *no more* than receiving a wave and reproducing it." (italics in original)

The petition misinterprets the opinion of the Court of Appeals. The Court of Appeals did not say that the use of a transmitter is the same thing as the reception of a broadcasted wave and did not say that the use of Armstrong's wide band invention "consists in doing no more than receiving a wave and reproducing it". What the Court of Appeals did say was that Section 271(a) of the Act does not require that there be common ownership of the wide swing transmitter and wide band FM receiver before direct infringement could occur. The Court of Appeals took note of the fact that when FM broadcast transmitters operating in accordance with Armstrong's teachings were on the air and when wide band FM receivers, also constructed in accordance with Armstrong's teachings, were tuned in and receiving the waves broadcast from such transmitters, there was the "totality of the elements" assembled and operated for the practice of Armstrong's invention as claimed and that the use of such assembly, unless authorized, constituted direct infringement of patent '069 and reissue '660. When Motorola tuned in its FM receivers to FM broadcasts on the air, Motorola completed the use of Armstrong's inventions and such unlicensed acts by Motorola, as held by the Court of Appeals, constituted direct infringement of patent '069 and of system claims 1 and 2 of reissue '660. The Court of Appeals held further that Motorola became a contributory infringer when it sold its FM receivers (Petition, 14a).

The statement in the petition that the practice of Armstrong's system invention required that a single person or entity operate both the transmitter and receiver (Petition, p. 21) is in conflict with the facts as to how broadcasting is organized and operated. It also is in conflict with Arm-

strong's patent '069 which disclosed a new art of radio communication that was embodied in novel radio transmitters and novel receivers to produce a new result in noise reduction, regardless of who might own the constituent parts.

Manifestly, Armstrong's inventive teaching had nothing to do with the historical accidents of equipment ownership in the broadcast services; and the full use of his inventive teaching and the resulting establishment of new and superior radio services for the public was not precluded by the circumstance that in the United States broadcast receivers are privately owned and are not owned or normally supplied by the corporations which own the broadcast transmitting facilities.

Moreover, there is no requirement in the patent law that direct infringement can exist only if there can be found a single person or entity—as distinguished from several persons acting in concert or in sequence—who practices all of the steps of an invention or owns and operates all of the apparatus connected with the invention. The petition cites no authority to the contrary.* There has never been any such limitation in the patent statute, and the federal courts, when the circumstances were presented, have uniformly held that a patent on an inventive system or combination comprising separate assemblies owned and operated by different persons was infringed by the conjoint use of the interacting but separately owned assemblies.

---

*Motorola suggests that the claims of patent '069 require that "the infringer", viz. one person, control both the transmitter and receiver (Petition, p. 21). But there is nothing in the '069 claims or in the nature of radio communication that calls for such common control (Petition, 28a).

The Authorities Confirm That Infringement of a System Patent Does Not Depend Upon Common Ownership and Operation of All of the Constituent Parts.

Such a situation was presented by the famous patents of Nikola Tesla relating to the generation and transmission of power by the use of polyphase electric currents. The Tesla patents were on a system comprising a generator for producing polyphase current (that would normally be operated by a public utility) and a motor that was adapted to be driven by Tesla's novel polyphase current and that would normally be owned by a commercial user of electric power. The Tesla generator and motor, working together as complementary instruments, constituted a major improvement in the utilization of electric power over great distances.

The federal courts held that the manufacture and use of motors adapted to work in Tesla's patented system infringed the Tesla system patents, despite the fact that the generators which were part of the patented system were not owned or operated by the infringer. (*Westinghouse Electric & Mfg. Co.* v. *Dayton Fan & Motor Co.* (CC SD Ohio WD, 1901), 106 F. 724, 729, aff'd (CCA 6, 1902), 118 F. 562; *Westinghouse Electric & Mfg. Co.* v. *New England Granite Co.* (CC Conn., 1900), 103 F. 951, 967, 972; *Westinghouse Electric Mfg. Co.* v. *New England Granite Co.* (CCA 2, 1901), 110 F. 753).

A similar situation was later presented in the extensive grease gun litigation which reached this Court (*Lincoln Co.* v. *Stewart-Warner Corp.* (1937), 303 U. S. 545, and *Rogers* v. *Alemite Corporation*, reported with *Bassick Co.* v. *Hollingshead Co.* (1936), 298 U. S. 415, 423-426). The patents in those cases related to systems for greasing automobiles comprising grease guns, special fittings on the

automobile at bearing points and special couplers to link the grease gun to fittings on the automobile so that grease under high pressure could be applied to the bearings. Some of the patents had claims on the complete assembly of grease gun, coupler and fittings. A complete use of the patented assembly occurred when the owner of an automobile with fittings installed by the manufacturer took his car to a garage and a mechanic greased the car with a grease gun and coupler owned by the garage and purchased from its own supplier.

In the grease gun cases, the lower federal courts, after finding that there was invention in the assembly and that the particular claims on the assembly were valid, held that there was infringement by the separate sale of fittings to automobile manufacturers and by the separate sale of guns with couplers to garages. Infringement by the unauthorized sale of such separate devices was found despite the fact that there would be situations where unlicensed fittings would be greased by licensed guns and couplers and unlicensed guns and couplers might be used to force grease through licensed fittings. (*Stewart-Warner Corporation* v. *Le Vally* (ND Ill. 1936), 15 F. Supp. 571; aff'd *Lincoln Engineering Co.* v. *Stewart-Warner Corporation* (7 Cir. 1937), 91 F. 2d 757; *Bassick Mfg. Co.* v. *Adams Grease Gun Corporation* (2 Cir. 1931), 52 F. 2d 36, 37-39; and *Alemite Corporation* v. *Rogers et al.* (WD Pa. 1934), 5 F. Supp. 940; aff'd *Rogers et al.* v. *Alemite Corporation* (3 Cir. 1934), 74 F. 2d 1019).

While the grease gun cases were reversed in this Court (*Rogers* v. *Alemite Corporation,* reported with *Bassick* v. *Hollingshead,* 298 U. S. 415, 423-426, and *Lincoln Co.* v. *Stewart-Warner,* 303 U. S. 545), it is significant that the express ground of reversal was that the patent claims were void. Contrary to the decisions below, this Court concluded

that there was not any invention in the assembly and interaction of grease gun, coupler and fitting and that the claims on the assembly were void as claiming more than the patentees had invented. This Court did not rule that there could not be infringement of a valid patent on the grease gun system unless there was common ownership of all of the constituent parts of the system. On the contrary, implicit in the opinions was the premise that the patents were infringed, as held below, unless the system claims were void.

So here, the only significant question could be whether Armstrong's wide band FM system constituted patentable invention and whether patent '069, which claimed the system as a whole, is valid. The courts below have thoroughly examined that question and have sustained Armstrong's patents on a record that shows invention of the highest order. No question as to the validity of patent '069 (nor of system claims 1 and 2 of reissue '660) is presented in the petition.

Motorola's contentions here show no conflict in federal decisions on infringement of system patents and do not present any substantial question concerning the principles of infringement law nor any question of public importance.

CONCLUSION

The petition for certiorari should be denied.

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SUPREME COURT, U. S.

AUG 24 1967

JOHN F. DAVIS, CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1967.

No. 395

MOTOROLA, INC.,

Petitioner,

vs.

ESTHER MARION ARMSTRONG, EXECUTRIX,

Respondent.

REPLY BRIEF FOR PETITIONER.

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Respondent.

REPLY BRIEF FOR PETITIONER.

Respondent's brief in opposition points to the fact that the three patents in suit have expired, the patent licenses have terminated, and there is no other pending litigation involving the patents or licenses.

The '069 and the reissue patents which are involved in the petition, expired respectively, in 1950 and 1957. However, the District Court held that plaintiff is entitled to an accounting (Petition, App. B, p. 22a), so that the present litigation is very live and all questions presented by the petition will affect this issue of damages still to be resolved in this lawsuit.

The expiration of the patents and termination of the licenses, however, are not mentioned in the decision of the Court of Appeals, and these facts have no relation to

the conflict between the principles at issue here from that decision and the decisions of this Court, nor do they affect the public importance of the questions presented (Petition, p. 23). The decision of the Court of Appeals represents the law of that circuit for the issues decided, and inasmuch as the Seventh Circuit is one of the most active circuits in patent litigation, such decision, until reviewed by this Court, is in a status of direct conflict with the decisions of this Court as well as the decisions of other courts of appeals and district courts. The decision of the Court of Appeals will serve as a precedent affecting countless other pending and future patent infringement suits.

Respondent contends that there is no conflict between the decisions of this Court and the present decision of the Court of Appeals, but fails to meet, or in most instances, even to discuss the reasons which petitioner asserts for granting the Writ. For instance, respondent does not in any way meet the issue here of the expansion by the Court of Appeals of the two-element monopoly of combination claims 1 and 2 of the '069 and Reissue '660 patents to a one-element monopoly (1) for purposes of licensing, (2) for determination of infringement against receivers alone, and (3) for the change from the original two-element combination patent to a reissue which adds one-element receiver claims to the patent monopoly.

It is petitioner's position that the following contentions which respondent makes in the brief actually emphasize the conflicts asserted in the present petition as the basis for certiorari:

1. (Respondent's Brief, p. 11.) The Court of Appeals' decision is said to be "in full accord with the basic principles of infringement law and the authorities." However, no decision is specifically identified and discussed by respondent which in any way qualifies the principles of infringement law referred to by this Court in *Aro Manufac-*

turing Co., Inc. v. *Convertible Top Replacement Co., Inc.* (ARO I), 365 U. S. 336, *Mercoid Corp.* v. *Mid-Continent Investment Co.*, 320 U. S. 661, and *McClain* v. *Ortmayer*, 141 U. S. 419 (Petition, pp. 21, 22), which govern in this case the application of combination two-element (transmitter and receiver) claims to the manufacture and sale of only one element (receiver) of those claims.

2. (Respondent's Brief, pp. 12, 16.) From the premise (p. 12) that none of the decisions of this Court on misuse referred to by petitioner apply to the affairs of an individual inventor-licensor as contrasted to a manufacturer-licensor (p. 16), respondent completely ignores the principles of those decisions as applied to the question presented here of the expansion by contract of a two-element combination patent. Broadcasters had to take a license under the combination claims for the transmitter and its operation, and the receiver manufacturer had to take a license under those same combination claims for the manufacture and sale of a receiver alone in order to avoid a suit for patent infringement.

The Court of Appeals makes no mention of, let alone attempts to distinguish the Mercoid Cases.[1] Respondent in trying to distinguish those decisions of this Court accentuates the real conflict which petitioner has asserted which is between the *principles* enunciated in those cases and the decision of the Court of Appeals here, for none of the controlling principles to which we have referred suggest that this Court limited them to "a manufacturing business."

Respondent emphasizes still further the conflict in the application of the principles stated in the decisions of this Court and respondent's interpretation of the misuse ques-

1. *Mercoid Corporation* v. *Mid-Continent Investment Company*, 320 U. S. 661 (1944).

Mercoid Corporation v. *Minneapolis-Honeywell Regulator Company*, 320 U. S. 680 (1944).

tion presented here, in referring in the footnote on page 8 of the brief to the receiver patent '066 in the receiver licenses, and the transmitter patent '068 in the transmitter licenses, for these one-element patents do not excuse the misuse. In *Ethyl Gasoline Corporation* v. *United States* (1940), 309 U. S. 436, this Court stated at p. 459 that "The patent monopoly of one invention may no more be enlarged for the exploitation of a monopoly of another, . . . than for the exploitation of an unpatented article, . . . or for the exploitation or promotion of a business not embraced within the patent."

3. (Respondent's Brief, pp. 12, 19, 22.) Respondent contends (Brief p. 12) that "The reissue was allowed in order to protect the invention that was intended to be covered and secured by the original patent and such reissue was in precise accord with the law as enunciated by this Court in *U. S. Industrial Chemicals, Inc.* v. *Carbide & Carbon Chemicals Corp.* (1942), 315 U. S. 668." The "invention" of the original Armstrong patent was recited in the *claims*, and the Seventh Circuit Court of Appeals recognized (Petition, App. A, p. 10a) that the claims in the original patent covered the transmitter and receiver in combination whereas the newly added "claims 4, 5 and 6 cover a *receiver*, or a method of *reception* for receiving an FM wave predistorted as provided in claims 1, 2 and 3." (Emphasis added.) Respondent also acknowledges this fact (Brief pp. 19, 22). But, as we pointed out in our petition (p. 17), the omission of the transmitter (claims in Petition, App. D, pp. 28a-30a), or the steps of generating and transmitting a wave which were essential to the practice of the system originally claimed corresponded to "the omission from a reissue patent of one of the steps or elements prescribed in the original, thus broadening the claims to cover a new and different combination, [which] renders the reissue void, . . ." *U. S. Industrial Chemicals, supra,* at page 678. This Court stated that it had "uniformly held" this prin-

ciple, and this underscores the conflict with the decision of the Court of Appeals sustaining the Armstrong Reissue '660 patent. However, respondent makes no reference whatsoever to this governing principle.

4. (Respondent's Brief, pp. 17, 18.) Respondent contends again (Petition p. 12) that petitioner has quoted language out of context in ARO I (Brief p. 17). Respondent interprets that decision as determining the distinction between "repair" and "reconstruction" of a patented combination in the replacement of worn out fabrics in a patented convertible top, and apparently dismisses such decision as irrelevant.

There is no such factual situation, however, in decisions[2] of district courts and of courts of appeals wherein ARO I, has been cited for the principle that "the claims made in the patent are the sole measure of the grant, . . ." (ARO I, p. 339). Furthermore, the principle stated by this Court at page 344 of ARO I that, "if anything is settled in the patent law, it is that the combination patent covers only the totality of the elements in the claim and that no element, separately viewed, is within the grant." has been referred to in decisions[3] of both district courts and courts

2. *Reiner et al.* v. *Leon Co.*, 324 F. 2d 648, 651 (2nd Cir. 1963).
Neff Instrument Corporation v. *Cohu Electronics, Inc.*, 298 F. 2d 82, 88 (9th Cir. 1961).
B. L. Hutchinson et al. v. *Pacific Car and Foundry Co.*, 319 F. 2d 756, 758 (9th Cir. 1963).
McCullough Tool Co. et al. v. *Well Surveys, Inc., et al.*, 343 F. 2d 381, 403 (10th Cir. 1965).
M & R Dietetic Laboratories, Inc. v. *Dean Milk Co.*, 203 F. Supp. 130, 146 (D. C. N. D. Ill. E. D. 1961).
Magic Fingers, Inc. v. *Auger et al.*, 232 F. Supp. 372, 375 (D. C. S. D. Maine 1964).
American Infrared Radiant Co. v. *Lambert Industries, Inc.*, 238 F. Supp. 176, 183 (D. C. Minn. 1965).

3. *Bullard Company* v. *General Electric Company*, 348 F. 2d 985, 990 (4th Cir. 1965).
Pierce v. *Aeronautical Communications Equipment, Inc.*, 307 F. 2d 790, 795 (5th Cir. 1962).

of appeals where the facts in no way related to "repair" and "reconstruction."

These decisions evidence again the clear-cut conflict not only between the Court of Appeals for the Seventh Circuit in the present case and the decisions of this Court, but between all of the other courts identified in the footnotes and the Seventh Circuit. These principles enunciated by this Court in ARO I, apply to all of the three questions involved in the present petition, for each concerns the determination of the scope of combination patent grants adjudicated in this case and at issue here. Respondent's reference to ARO I which ignores these principles accentuates the conflicts which petitioner discusses, and the need for supervisory review of the decision of the Court of Appeals by this Court.

Hewitt-Robins, Inc. v. *Link-Belt Company*, 371 F. 2d 225, 229 (7th Cir. 1966). (By a different panel than that which decided the present case.)

Blumcraft of Pittsburgh v. *Ladd*, 238 F. Supp. 648, 649 (D. C. D. C. 1965).

Brooks et al. v. *Reynolds*, 239 F. Supp. 984, 986 (D. C. D. C. 1965).

CONCLUSION.

For these reasons, supplementing those in the petition, grant of certiorari is fully warranted.

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1967.

No. 395

MOTOROLA, INC.,

Petitioner,

vs.

ESTHER MARION ARMSTRONG, EXECUTRIX,

Respondent.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

PETITION FOR REHEARING.

Petitioner prays that this Court grant rehearing of its order of October 9, 1967 denying the Petition for Writ of Certiorari, and that a Writ of Certiorari issue to review the judgment of the United States Court of Appeals for the Seventh Circuit in the above-entitled case as prayed for in the Petition filed July 20, 1967 herein.

This Petition for Rehearing is filed under this Court's Rule 58, paragraph 2, and presents substantial grounds

available to Petitioner although not previously presented,[1] grounds as to which a direct conflict of decision between Circuit Courts of Appeals has arisen subsequent to the filing of the Petition for Writ of Certiorari herein. Specifically, such grounds concern the defense of misuse of licensed patents to impose restrictions on the resale by the licensee of licensed items purchased by the licensee from other than the patentee-licensor.

The Court of Appeals in the present case rejected the defense that the license restrictions were a misuse of the licensed patents. Motorola claimed there "that it was unlawful for Armstrong to restrict the classes of consumers to whom manufacturer licensees could sell" (Pet. App. p. 16a).[2]

A decision dated September 15, 1967 of the Fifth Circuit Court of Appeals,[3] almost two months after the filing of the Petition in this matter, is in direct conflict with the decision of the Court of Appeals for the Seventh Circuit on this latter point, thus making it appropriate at this time to ask this Court to consider the issue. That issue may be stated as follows:

---

1. Petitioner is not precluded from raising the question now because, by entry of a decree for an accounting here, this Court would, as in *Mercoid Corp.* v. *Mid-Continent Invest. Co.*, 320 U. S. 661, 670, "be placing its imprimatur on a scheme which involves a misuse of the patent privilege and a violation of the anti-trust laws. . . ."

In the original Petition, Petitioner presented only questions concerning Armstrong's licensing scheme wherein patents on a two-element combination were used to control each unpatented separate element of that combination by a separate license with separate royalties paid on each such unpatented element.

2. The decision of the Seventh Circuit Court of Appeals (374 F. 2d 764) will be referred to herein by the Appendix page number from the original Petition as (Pet. App. p. . .).

3. The decision of the Fifth Circuit Court of Appeals referred to herein was published in 155 USPQ 183 (Advance Sheet of October 23, 1967), but the slip opinion is printed in the Appendix herewith and will be referred to as (App. p. . ., *infra*).

Whether a patentee violates the federal antitrust laws so as to be guilty of patent misuse when, in a license which includes the right to have others make for the licensee, the patentee restricts to certain specified uses the resale of the licensed product purchased by the licensee from others.

On September 15, 1967, the United States Court of Appeals for the Fifth Circuit in *Hensley Equipment Company, Inc.* v. *Esco Corporation,* affirmed the District Court for the Northern District of Texas holding the patent in suit valid and infringed. However, that Court of Appeals found that a patent license granted by the plaintiff was a *per se* violation of the Sherman Act, and reversed the district court and dismissed the complaint on the grounds that such violation was a misuse of the patent in suit which barred the plaintiff from enforcing that patent (App. p. 18, *infra*). This Court's attention is respectfully directed to pages 10-23 of the Appendix herewith where the relevant portions of the opinion are set forth, and the conflict is manifested.

The license held in *Hensley* v. *Esco* to constitute a misuse of the Esco patent was one granted to the Caterpillar Tractor Company giving it the right to have manufactured for it (as well as to manufacture itself) and to resell excavating teeth for earth-moving equipment. Excavating teeth were the "licensed product." The agreement restricted the resale by Caterpillar of the licensed product made for it by others (and thus purchased from them) to certain customers (Caterpillar dealers) and for certain specified uses (App. p. 17, footnote 22, *infra*).

In the present case, in each license (Plaintiff's Exhibit 15), Armstrong granted the licensee the right to have manufactured for it (as well as to make itself), and to resell the radio broadcast receivers and television (TV)

receivers made for the licensees by others. In each license Armstrong restricted the customers to whom sales could be made and the uses for which sales could be made. Each license permitted receivers to be sold only for "experimental and non-commercial reception." This phrase was defined in another provision of the license[4] as reception by "experimenters and amateurs only." These restrictions on resales by Armstrong licensees of receivers made for them by others were still further limited by excluding six different types of reception (Footnote 4, items (a) to (f) inclusive) and purposes as well as places of use within the original restricted fields. These six restrictions would prevent resale of a licensed receiver for use in places and for purposes such as in a tavern or restaurant, in an airplane for guidance purposes, on a ship for navigational purposes, or for any business service.

---

4. 8. "Experimental and non-commercial broadcast reception" shall mean the reception of programs by any one and the reception, by experimenters and amateurs only, of sound, visual images or graphic matter or any combination thereof (other than programs) transmitted by wireless; provided that such term shall not include:

(a) Reception for profit or compensation of any nature, direct or indirect;

(b) Reception for the purpose of relaying, rebroadcasting or otherwise retransmitting, except reception at one point in a hotel or other building, or in a group of associated structures such as a summer camp, or in a ship, for transmission by wire to other points therein;

(c) Reception for the purpose of point to point communication or for the purpose of rendering a business, commercial or official service;

(d) Reception for the purpose of public performance or exhibition where admission is charged;

(e) Reception by or from any airplane or other conveyance for the primary purpose of aiding, directing or reporting the operation or movements of such conveyance; and

(f) Reception for the purpose of measuring or determining direction or position for navigational or orientational purposes.

(Appendix to Defendant-Appellant's Brief in the Court of Appeals, Vol. VI, pp. 3631-32.)

The Seventh Circuit Court of Appeals *approved* the license restriction provisions, rejected Motorola's misuse defense, and enforced the three licensed patents in suit by affirming the judgment which requires an accounting to determine damages for patent infringement.

To the contrary, the Fifth Circuit Court of Appeals *disapproved* the provision in the Esco license applying restrictions on resales by the licensee and held that they were a *per se* violation of the Sherman Anti-Trust Act rendering the licensed patent unenforceable, although infringed.

This *direct conflict* between the two Courts of Appeals emphasizes the conflict which Petitioner asserted in its Petition for Writ of Certiorari between the Seventh Circuit and this Court, inasmuch as the Fifth Circuit relied upon decisions of this Court which Motorola had also relied upon, and which the Seventh Circuit either rejected or did not mention in its decision. For the convenience of this Court, the conflicts are detailed as follows:

Fifth Circuit (*Hensley* v. *Esco*)	Seventh Circuit (*Armstrong* v. *Motorola*)
1. Court affirmed trial court on patent infringement (App. p. 24, *infra*).	1. Court affirmed trial court on patent infringement (Pet. App. A, p. 11a).
2. Court disapproved a license restricting the uses for which the licensed product made for the licensee by another could be resold by licensee, and held misuse (App. p. 24, *infra*). Court held the restriction a *per se* violation of the antitrust laws (App. p. 18, *infra*).	2. Court approved a license restricting the uses for which the licensed product made for the licensee by another could be resold by licensee, and held no misuse (Pet. App. A, pp. 16a, 7a).
3. Court held that the license restriction was an attempt to exploit a patented invention beyond the scope of the patent monopoly, that this was	3. Court *did not* refer to the "unclean hands" doctrine, and *did not* even refer to any of the decisions of this Court relied upon by the Fifth Cir-

FIFTH CIRCUIT (*Hensley* v. *Esco*)	SEVENTH CIRCUIT (*Armstrong* v. *Motorola*)
misuse of the patent, and that the equitable doctrine of "unclean hands" applied (App. pp. 10-13, *infra*), citing *U. S. Gypsum* v. *National Gypsum Co.*, 352 U. S. 457, 465 (1957); *Morton Salt Co.* v. *G. S. Suppiger Co.*, 314 U. S. 488 (1942); *B. B. Chemical Co.* v. *Ellis*, 314 U. S. 495 (1942); *Mercoid Corp.* v. *Mid-Continent Invest. Co.*, 320 U. S. 661, 665 (1944).	cuit and noted in parallel item 3 in this outline.
4. Defendant Hensley was a nonlicensee, and was held to be an infringer of the licensed patent in suit (App. pp. 9, 10, *infra*).	4. Defendant Motorola was a nonlicensee, and was held to be an infringer of the three licensed patents in suit.
5. Court stated that some evidence that Esco did not know whether license restrictions being followed, and no evidence of Esco taking action to enforce the restrictions (App. p. 18, *infra*).	5. No reference in decision as to whether Armstrong did or did not police and enforce restrictions in license.
6. Court held (App. p. 13, *infra*): "Where a contract clause forms the basis for a misuse defense, a mere showing that the clause is not enforced has been held insufficient to dissipate the misuse or prevent a successful assertion of the defense."	6. Court rejected Motorola's misuse defense, and held that the Armstrong licenses were good under *General Talking Pictures* v. *Western Electric Co.*, 304 U. S. 175, 305 U. S. 124 (Pet. App. p. 16a).
7. Court stated (App. p. 19, *infra*): "As we understand the interplay of *Schwinn* and *Hartford-Empire*, and the underlying patent policy, there is no inquiry into purity of heart vs. bad motive, or market impact, or matters of what may seem to be essential fairness — a *per se* violation of the Sherman Act	7. Court stated (Pet. App. p. 16a): "Motorola has stated no authority for the proposition that unlawful license restrictions protect a nonlicensee (such as Motorola) from infringement liability."

Fifth Circuit (*Hensley* v. *Esco*)	Seventh Circuit (*Armstrong* v. *Motorola*)
is deemed such a monopolistic action that the patentee is barred from enforcing the limited and special monopoly given him by the patent laws."	
8. In determining that the patent monopoly is "exhausted" by the first sale, and the patent law does not protect attempts by the patentee to control the use of the licensed product after that sale, the Court of Appeals cited *United States* v. *Univis Lens Co.*, 316 U. S. 241 (App. p. 17, *infra*).	8. The Court below in the present case stated (Pet. App. p. 17a): "The principal authority advanced by Motorola is *United States* v. *Univis Lens Co.*, 316 U. S. 241, but that was a Sherman Act case in which the patentee had been using his patent to achieve resale price maintenance and therefore the case is not in point."
9. Reversing the trial court on misuse, the Court of Appeals held (App. p. 18, *infra*): "Under *Hartford-Empire* [323 U. S. 386], this *per se* violation of the anti-trust laws bars Esco from enforcing its patent in this case."	9. The Court below rejected anti-trust decisions, affirmed the trial court on misuse, and also affirmed the trial court as to infringement and damages (Pet. App. pp. 15a, 16a, 17a, 7a-11a).

The Fifth Circuit's *reliance* upon *United States* v. *Univis Lens Co.* (1942), 316 U. S. 241, as distinguished from the Seventh Circuit's refusal to recognize the applicability of that decision, emphasizes the *direct conflict* of the Seventh Circuit with the decisions of this Court. Although there was price fixing involved in the *Univis Lens* case, Mr. Chief Justice Stone made it very clear that the controlling principle was not price fixing but the exhaustion of the patent monopoly upon the sale of the licensed product, for he stated at page 250:

> "His [the patentee's] monopoly remains so long as he retains the ownership of the patented article. But sale of it exhausts the monopoly in that article and the patentee may not thereafter, by virtue of his patent, control the use or disposition of the article."

And, at page 252 Mr. Chief Justice Stone further stated:

> "Accordingly neither the Lens Company nor the Corporation, by virtue of the patents, could after the sale of the lens blank exercise any further control over the article sold."

In other words, where the Fifth Circuit in the *Esco* case recognized the applicability of *United States* v. *Univis Lens, supra,* the Seventh Circuit brushed the decision aside as involving resale price maintenance. There was no resale price maintenance in the *Esco* case.

In the more recent decision in *Sears, Roebuck & Co.* v. *Stiffel Co.* (1964), 376 U. S. 225, this Court reversed the Court of Appeals for the Seventh Circuit and held at page 230 that:

> ". . . the patentee's control over the product when it leaves his hands is sharply limited, see *United States* v. *Univis Lens Co.,* 316 U. S. 241, 250-252, 86 L. ed. 1408, 1418, 1419, 62 S. Ct. 1088 (1942), and the patent monopoly may not be used in disregard of the antitrust laws, see *International Business Machines Corp.* v. *United States,* 298 U. S. 131, 80 L. ed. 1085, 56 S. Ct. 701 (1936); *United Shoe Machinery Corp.* v. *United States,* 258 U. S. 451, 463-464, 66 L. ed. 708, 719, 720, 42 S. Ct. 363 (1922)."

The continuing vitality of the *Univis Lens Co.* decision is forcefully illustrated by the reliance on that decision in the *Sears, Roebuck & Co.* opinion. The failure of the Seventh Circuit to follow *Univis Lens Co.* in the *Sears, Roebuck* litigation has its counterpart in the present case. There was no *resale price maintenance* in the *Sears, Roebuck* case.

Thus, with the *Esco* case decision of September 15, 1967 there is a clear and complete conflict between these Circuit Courts of Appeals in two jurisdictions which have extensive

patent litigation.[5] The conflict involves the very important question as to whether or not a patentee-licensor is guilty of patent misuse when he includes conditions in a patent license restricting to specified uses (and consequently to persons who are such users) the sale of the licensed product when made for the licensee by another. The Fifth Circuit held that when the manufacturer sells to the licensee, the patent monopoly of the patentee-licensor is exhausted. The Seventh Circuit held the contrary and approved the same specified use restrictions.

The licensee in the *Esco* case chose to buy the licensed product from the patentee, who was also a manufacturer, instead of from another. The Fifth Circuit opinion did not attribute any legal significance to this choice by the licensee. Nor, should it have done so.

If the rule that the first sale exhausts the patent monopoly were subject to an exception when the sale is made to a licensee with a right to have made for him, the door would be opened for patentees, in addition to continuing to impose use restrictions at the manufacturer-licensee level (where they are now sanctioned by *General Talking Pictures Corporation* v. *Western Electric Company, Inc.*, 304 U. S. 175 (1938), 305 U. S. 124), to impose them also at the distributor-licensee level. The patentee would simply license distributors to have the licensed product made for them and could then impose his use restrictions on their resales. This extension of the dubious principle of *General Talking Pictures* to another level of the distribution system

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5. There is no evidence that any of Armstrong's licensees exercised their right to have others manufacture for them. But this is immaterial. The restriction here limited the uses and persons to whom the licensees could sell (only those who would not use the licensed product for a particular purpose). The mere existence of such a restriction is enough, *United States* v. *Arnold Schwinn & Co.*, 18 L. ed. 2d 1249, 1260 (see quote from *Schwinn* at p. 17 of App., *infra*).

is plainly contrary to the public interest and the policy of our antitrust laws.

The legal principle stated by this Court in *United States* v. *Univis Lens, supra,* should apply to the first vending of the patented article regardless of who the seller might be. This Court said in that decision, at pp. 251-252 of 316 U. S.:

> "In construing and applying the patent law so as to give effect to the public policy which limits the granted monopoly to the terms of the statutory grant, *Morton Salt Co.* v. *Suppiger Co.,* 314 U. S. 488, the particular form or method by which the monopoly is sought to be extended is immaterial. *The first vending of any article manufactured under a patent puts the article beyond the reach of the monopoly which the patent confers.*" (Emphasis supplied.)

If it is *unlawful* for a patentee to control his licensee's resale of the licensed product when that product is purchased from the patentee (as it clearly is unlawful under *Univis Lens*), why should the same injury to the public become *lawful* when the licensee purchases from a third party-manufacturer instead of from the patentee?

The issue presented by Petitioner is one not yet decided by this Court that concerns the limits of the privilege with which a patent owner is entrusted by the grant of a patent and which he passes to another for a valuable consideration and personal benefit to himself. Is the right to license the resale of a product made for the licensee by another for specified uses only an aspect of the privilege inherent in the grant of a patent? This is the issue before this Court, emphasized by direct conflicts between Courts of Appeals, and with the decisions of this Court.

Such issue can be clarified only by this Court reconsidering its prior denial and the granting of *certiorari* herein.

Respectfully submitted,

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October, 1967.

CERTIFICATE OF COUNSEL.

I hereby certify that the foregoing Petition for Rehearing is presented in good faith and not for purposes of delay, and is restricted to grounds specified in Rule 58 of the rules of this Court.

Respectfully submitted,

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APPENDIX.

IN THE UNITED STATES COURT OF APPEALS

For the Fifth Circuit.

No. 23723.

HENSLEY EQUIPMENT COMPANY, INC.,

Appellant,

vs.

ESCO CORPORATION,

Appellee.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS.

(September 15, 1967.)

Before BELL, GODBOLD and DYER, Circuit Judges.

GODBOLD, Circuit Judge: Hensley Equipment Company, Inc., appeals from an adverse decision in a patent infringement action brought by Esco Corporation, assignee of United States Patent No. 2,919,506 (the " '506 patent").[1]

The suit concerns excavating teeth to be attached to the digging edge of power shovel buckets and similar excavating equipment. Because of the stress and abrasion to which

1. 251 F. Supp. 631 (N.D. Texas, 1966).

such a digging edge is subject the teeth must be replaceable. For a number of years two-part teeth have been available, each consisting of an "adapter" affixed to the bucket or digging apparatus and a "wear point" which is the forward or "spike" portion of the tooth. A projection of the adapter fits into a socket in the rear of the wear point. The wear point is held on the adapter by a removable pin. While adapters periodically must be replaced, the wear points bear the brunt of the abrasion and are replaced more frequently.[2]

Prior to the marketing of teeth produced under the '506 patent most two-piece excavating teeth had a wedge-shaped projection on the adapter with a correspondingly-shaped socket in the rear of the wear point. The horizontal surfaces of wedge-shaped adapter and point were the bearing surfaces at which the two parts came in contact. The bearing surfaces were flat. Under some operating conditions lateral pressure or thrust on the tooth caused sideways movement, producing a pivoting action between adapter and wear point, reducing the full (or substantial) contact or bearing between the two parts, causing instead "point contact" concentrated in a small area of the two bearing surfaces. Under these conditions the teeth were subject to rapid distortion and wear and often broke under the concentrated pressure.

Insofar as can be stated in non-technical terms, the invention which the '506 patent (described as "Excavating Tooth and Base Support Therefor") purports to embody is as follows. A conical bearing surface is employed on the adapter and on a correspondingly shaped socket in the wear

2. On some pieces of equipment (drag lines used in strip mining coal), the bucket weighs 100 tons and moves 85 cubic yards of material at a bite, each tooth is 13 inches wide and weighs 425 pounds, and in use the teeth become so hot that they smoke and cannot be touched with the hand. Esco conical teeth vary from that size to as small as two inches wide, weighing three pounds.

point. Both the conical surface of the adapter and the conical surface of the wear point have, as a matter of geometry, a common vertical axis. Each conical surface comprises only a segment of a cone. See Figures 5 and 7 of drawings contained in the patent and made an appendix to this opinion, showing a structure with a complete conical surface (labelled 40) and demonstrating how a segment thereof (labelled 43 in Figure 7) is used to form the bearing surface of the adapter.[3]

Employing more technical language, the bearing surfaces of adapter and point are described in a number of claims as "surfaces of revolution" around a vertical axis.[4] The concept of use of a "surface of revolution," as opposed to surfaces which cannot be created by a single line rotated about a constant axis, is significant, and the creation of the two conical bearing surfaces of wear point and adapter around a common vertical axis likewise is significant.

The invention contemplates that because of the design of

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3. Figure 6 demonstrates a nose and socket structure comprised of a conical surface on the adapter engaging a corresponding conical surface on the point (see 44, 47 and 48) but with a flat surface (45) of the adapter engaging the flat surface (46) of the upper socket wall of the point—this is a "single cone" construction. Figure 4 shows a nose and socket structure with conical surfaces on upper and lower socket surfaces of the adapter and corresponding surfaces on the point—this is "double cone" construction, and its advantage is that the point, when worn on one side, can be reversed on the adapter.

4. Hensley's expert defined "surface of revolution" as follows: "A surface . . . is a two dimensional figure and . . . can be described by or . . . produced by a single dimensional figure or line . . . [W]e can take any line whatsoever and rotate it about a constant vertical axis and the figure which the line sweeps out is a surface of revolution. . . . [The shape of the surface] depends entirely on the shape of the line which generates it."

An umbrella demonstrates the concept more graphically. If the handle is considered the vertical axis and a single rib the rotating line, spinning the handle (thus rotating the line around the axis) causes the rib to define a surface of revolution in the shape of the cloth of the umbrella.

the bearing surfaces lateral movement produces little or no change in bearing contact between wear point and adapter. Irrespective of the relative positions of the two members their bearing surfaces remain in substantial contact, and no concentration of pressure develops at one or more points.

The conical tooth enjoyed significant commercial success, and in 1962 Esco received for it an award by a trade magazine, based on selection made by a panel of international mining and metallurgical experts, for "achievement in equipment development by aiding the technological advancement of the mining industry."

In 1965 Hensley began to sell wear points designed, intended, and advertised and held out to the public, as replacement points for Esco adapters. It did so after having supplied a steel company with models of Esco points and an Esco adapter and ordering the points be copied with certain modifications. Hensley publicly referred to its said wear points as "Esco-type points." The points will not fit adapters of any company other than Esco. Later Hensley began to market adapters for one of Esco's smaller conical points. In its catalogs it describes these wear points and adapters as "conical." Since the beginning of this litigation Hensley has acquired a steel foundry and now manufactures as well as sells the products described above.[5] Hensley also markets parts corresponding to products manufactured by Esco but not under the patent at issue[6] and by other manufacturers.

Esco's complaint alleged that Hensley had infringed the

5. Texas Steel Company, which manufactured the accused articles prior to Hensley's acquiring its own manufacturing facilities, was named as a defendant but was dismissed by stipulation.

6. Recently the Ninth Circuit affirmed a judgment against Hensley for infringement of another Esco patent. *Hensley Equipment Co.* v. *Esco Corp.*, 375 F. 2d 432 (9th Cir., 1967), affirming 265 F. Supp. 863 (N. D. Cal., 1965).

'506 patent by making and selling tooth points. Hensley answered, denying the validity of the '506 patent and infringement and alleging that sale of wear points constitutes legitimate repair. It also alleged that Esco was barred by misuse from enforcing the '506 patent. Several counterclaims were asserted, alleging in substance that Hensley manufactured and sold replacement wear points for those manufactured by Esco under United States Patents No. 3,026,947 and No. 3,079,710 as well as the '506 patent; that these patents were invalid; that Esco had violated the antitrust laws by bringing the present suit and by using the patents on products outside their scope. Hensley asked a declaratory judgment that all three patents are invalid, that Hensley was not infringing any of them, and that Hensley, its supplier and customers, could continue to manufacture, use, and sell the teeth and wear points without interference. Injunctive relief and triple damages also were demanded.

The district court held that the '506 patent is valid; that Hensley has infringed it; that Esco has not misused the patent, and that Esco is entitled to damages. Hensley was enjoined from further infringement of the '506 patent. The counterclaims were dismissed with prejudice except as related to validity and infringement of the '947 and '710 patents.

I.

Hensley challenges the position of the district court that the patent claims included a conical surface of revolution.

The claims, construed in the light of the specifications and drawings,[7] make clear to one familiar with the field involved that the surfaces of revolution—the bearing sur-

7. "It is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention." *United States* v. *Adams*, 383 U. S. 39, 49, 86 S. Ct. 708, ..., 15 L. Ed. 2d 572, 579 (1966).

faces—are to be conical, or nearly so, and are not to be flat. We hold that the patent was properly considered as claiming conical surfaces of revolution.

II. Validity.

The district court did not err in finding against Hensley on its defenses of anticipation under 35 U. S. C. A. § 102 and obviousness within the meaning of 35 U. S. C. A. § 103.

We need discuss at length only the closest prior art, the Hensley '601 wear point, marketed by Hensley since 1955 for use on its single-shank "rippers."[8] Testimony was produced that as rippers were used with tractors of higher power more breakage was experienced with the wear points, which had rectangular, or flat-surfaced, sockets to receive the wear collars. Therefore, Hensley began experimenting in 1951 or 1952 with a socket containing curved top and bottom, and in 1954 began marketing a wear point with such a feature. Subsequently larger models differing somewhat in the contour of the socket were marketed by Hensley. The 601-H, the model introduced at trial and relied upon by Hensley, was marketed in 1955 or 1956. Conflicting evidence was produced of the nature of the contour of the socket of the 601-H, and the district court found as a fact that it did not constitute a conical surface of revolution. Hensley argues that this is clearly erroneous and that the 601-H tooth literally anticipated the '506 patent or made its subject matter obvious to one skilled in the art.

It is clear that the 601-H point was an attempt to use a rounded socket connection between a wear point and its

8. A "ripper" is a device installed on the front or rear of a bulldozer or on the sides of a tractor. It consists of a shank extending beneath the surface of the ground which, when pulled or pushed through the grounds, "rips" it up. Hensley's rippers had replaceable wear points attached to "wear collars," corresponding in function to adapters.

support to reduce breakage. But Esco's expert, Professor William Tiller of Stanford University's Department of Material Science, testified that the '506 conical point differed significantly in both theory and engineering design from the Hensley 601-H point. The socket shape of the 601-H point, he testified, was approximately an ellipitical parabaloid. While it avoided some problems encountered with the rectangular socket models, rotational forces would cause the outer part of the 601-H to "ride up" over the inner part so as to cause "line contact", i.e., contact along a line of limited dimension as opposed to substantial surface-to-surface contact of bearing surfaces. This resulted in wearing of the adapter so as to distort its original shape. The '506 conical design possesses all the advantages of the 601-H shape plus the advantage of accommodating the rotational forces and movement; any wear, he testified, simply makes the cone fit better. He concluded there was little relationship between the '506 conical tooth and the Hensley 601-H.[9]

The district court did not err in finding that the 601-H tooth (and other prior patents) did not anticipate the '506 patent insofar as that patent claimed a conical surface of revolution about a vertical axis. Nor does the evidence establish that the conical design would have been obvious to one skilled in the art at the time of the invention.[10] In

9. Another witness, Grove, described the inside surface of the 601-H point, viewed as though cut through in vertical sections, to be a series of ellipses, starting from an ellipse at the front end, to an ellipse at the rear end, and midway approximately a circle.

10. It is desirable that the district courts make specific findings on the factual matters which the Supreme Court, in *Graham* v. *John Deere Co.*, 383 U. S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966), held determined obviousness: the state of the prior art, the level of ordinary skill in the art, and the difference between the prior art and the claims of the patent at issue. 383 U. S. at 17. That case was decided after the trial and decision in the present case, so it is understandable that the findings of the district court are not as explicit as they might be; however, we see no necessity of remanding for more explicit findings.

this connection the district court gave appropriate recognition to the secondary indicia of commercial success and industry recognition of satisfaction of unsolved needs, referred to in *John Deere,* 383 U. S. at 17-18.

Hensley contends that prior patents disclosing flat bearing surfaces (especially Baer, No. 2,483,032) anticipated. But the testimony was in conflict whether a flat surface correctly can be described as a "surface of revolution." Also we have held that the '506 claims, read in light of the specifications, disclose that the invention included nose and socket contours either conical or similar or equivalent thereto. Nor does the fact that the Hensley 601-H device, and prior patents (especially Morrison, No. 2,050,014), employed the concept of concave-convex bearing surfaces for wear point and adapter necessarily make obvious the particular type of surfaces embraced by the '506 patent, though they are within the generic term "concave-convex." Much more is embraced in the '506 than concavity and convexity.

Downie, No. 1,399,337, had a flat surface plus some tin inserts which from use conceivably might be worn or extruded so as to create arched or curved surfaces.[11]

The appellant contends the trial court erred in stating the presumption of validity prescribed by 35 U. S. C. A. § 282 must be overcome by clear and convincing evidence, arguing that the Patent Office failed to consider pertinent prior art and thereby removed or weakened the presumption. See *Zero Mfg. Co.* v. *Mississippi Milk Producers Ass'n,* 358 F. 2d 853 (5th Cir., 1966); *Up-Right, Inc.* v. *Safway Prods., Inc.,* 364 F. 2d 580 (5th Cir., 1966). But we have no hesitancy in holding that the patent in issue meets standards of validity without the necessity of resting it upon any presumption.

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11. While we specifically discuss Baer, Morrison and Downie we note that Hensley's expert testified none of them were as close to the patent in suit as the Hensley 601-H, which he considered the closest prior art.

The findings and conclusions of the district court on the issue of validity are affirmed.

III. Infringement.

The evidence was in conflict whether the configuration of the Hensley point was such that it embraced surfaces of revolution. Likewise there was evidence both ways on whether the Hensley point, when placed on an Esco adapter, sufficiently meets and remains in contact with it that it is within the requirement of the claims that bearing surfaces of wear point and adapter "remain in fitting contact" during movement of the wear point.[12] We are not able to say the district court was plainly erroneous on these factual questions.

Hensley also contends that sale of wear points alone cannot be infringement because, insofar as the '506 patent attempts to claim the wear point alone as an invention, it lacks the statutory requirement of utility. 35 U. S. C. A. § 101. Hensley reasons that the wear point alone serves no useful function unless combined with the adapter. It is urged that we treat the situation as one of replacement of an unpatented part of a patented machine in the exercise of the right of legitimate repair.[13]

But the invention of the '506 patent is not simply a combination of elements, all previously known, into a pur-

12. For example, there was evidence that the lesser surface contact of the Hensley point is caused by inevitable variations in mass production; that the relevant contact is that encountered under the severe pressures of actual operation, and that Hensley's points functioned adequately on Esco's adapters; that Hensley checks all its conical points for fit against an Esco adapter before shipping them.

13. See *Wilbur-Ellis Co.* v. *Kuther*, 377 U. S. 422, 84 S. Ct. 1561, 12 L. Ed. 2d 419 (1964); *Aro Mfg. Co.* v. *Convertible Top Replacement Co.*, 365 U. S. 336, 81 S. Ct. 599, 5 L. Ed. 2d 592 (1961); *Fromberg, Inc.* v. *Thornhill*, 315 F. 2d 407 (5th Cir., 1963).

portedly new machine. It is a machine composed of two basic parts, a wear point and an adapter, each of which contains an integral portion of the novel factor, a bearing surface made in the form of a conical surface of revolution. The claims embrace the complete machine, *i.e.*, the excavating tooth, and also the two basic parts, wear point and adapter. Utility of the wear point is not lost because it must be used with something else to produce an advantageous result.

Since in manufacturing and selling patented wear points Hensley infringed specific claims of the patent, it cannot be protected by the doctrine of legitimate repair. Walker, *Patents* §§ 379, 509 (1937 Ed.). "To supply patented parts of a patented combination without authority from the patentee is a direct infringement of the claims of the patent on the part and a contributory infringement of the claims of the patent on the combination, assuming that the requirements of 35 U. S. C. A. § 271(c) are otherwise met. (Citing cases.)" *Warner & Swasey Co.* v. *Held,* 256 F. Supp. 303, 311 (E. D. Wis., 1966).

IV. Misuse.

Assuming validity and infringement of the '506 patent, is Esco barred from enforcing its rights because it has misused the patent?

The constitutional provision authorizing congressional grants of patents[14] is "both a grant of power and a limitation," *Graham* v. *John Deere Co., supra.* Neither Congress nor the courts may exercise or apply the patent authority in such manner as to give a patentee more than the rewards of his discovery. "Under the patent law the patentee

14. Art I, § 8 of the Constitution authorizes Congress "to promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries."

is given by statute a monopoly of making, using and selling the patented article." *United States* v. *General Electric Co.*, 272 U. S. 476, 485, 47 S. Ct. 192, . . . 71 L. Ed. 362, 363 (1926). Pursuant to this monopoly the patentee may exploit his exclusive rights as he sees fit, but should his exploitation exceed means "normally and reasonably adapted to secure pecuniary reward for the [patent] monopoly," his actions become subject to the same restraints as are imposed upon those not protected by a patent's monopoly, such as the antitrust laws. *United States* v. *General Electric, supra.*

One who attempts to exploit a patented invention beyond the scope of the patent monopoly may be the subject of a judicially-imposed disability to enforce the patent. "It is now . . . familiar law that the courts will not aid a patent owner who has misused his patents to recover any of their emoluments accruing during the period of misuse or thereafter until the effects of such misuse have been dissipated, or 'purged' as the conventional saying goes. (Citing cases.) The rule is an extension of the equitable doctrine of 'unclean hands' to the patent field." *United States Gypsum Co.* v. *National Gypsum Co.*, 352 U. S. 457, 465, 77 S. Ct. 490, . . . , 1 L. Ed. 2d 465, 471 (1957). But the simplicity with which the rule may be stated is misleading. In 1955 the Attorney General's National Committee to Study the Antitrust Laws commented that "the outer reach of the misuse doctrine has not yet been fully defined."[15] Eleven years later in 1966 the President's Commission on the Patent System reported that uncertainty as to the precise nature of the patent right coupled with lack of doctrinal clarity in the misuse rule has "produced confusion in the public mind and a reluctance by

15. Report of the Attorney General's National Committee to Study the Antitrust Laws 251 (U. S. Government Printing Office, 1955).

patent owners and others to enter into contracts and other arrangements pertaining to patents or related licenses.'"[16]

The doctrine of misuse was developed by the Supreme Court in a series of early cases as a defense against contributory infringement.[17] In 1942 the Court applied it in a case of direct infringement. *Morton Salt Co.* v. *G. S. Suppiger Co.*, 314 U. S. 488, 62 S. Ct. 402, 86 L. Ed. 363 (1942). See also *B. B. Chemical Co.* v. *Ellis*, 314 U. S. 495, 62 S. Ct. 406, 86 L. Ed. 367 (1942). The rationale of the doctrine is a rejection of the concept of the patent as an absolute property right in favor of its definition as a right which must not be exercised in a manner not consistent with the constitutionally-defined purpose for which it was conferred, i.e., to "promote the Progress of . . . useful Arts." In *Mercoid Corp.* v. *Mid-Continent Invest. Co.*, 320 U. S. 661, 665, 64 S. Ct. 268, ____, 88 L. Ed. 376, 380 (1944) Mr. Justice Douglas emphasized that to allow an infringement suit by a patentee who has misused his patent "would be to extend the aid of a court of equity in expanding the patent beyond the legitimate scope of its monopoly." It is not necessary that the defendant asserting the misuse defense has been—or would be—injured by the misuse. In *Morton Salt Co.* v. *G. S. Suppiger, supra*, Mr. Justice Stone wrote:

> "It is a principle of general application that courts . . . may appropriately withhold their aid where the plaintiff is using the right asserted contrary to public policy.
>
> • • • • •

16. To Promote the Progress of . . . Useful Arts 37 (U. S. Government Printing Office, 1966).

17. E.g., *Motion Picture Patents Co.* v. *Universal Film Mfg. Co.*, 243 U. S. 502, 37 S. Ct. 416, 61 L. Ed. 871 (1917); *Carbice Corp. of America* v. *American Patents Development Corp.*, 283 U. S. 27, 51 S. Ct. 334, 75 L. Ed. 819 (1931); *Leitch Mfg. Co.* v. *Barber Co.*, 302 U. S. 458, 58 S. Ct. 288, 82 L. Ed. 371 (1938).

> "It is the adverse effect upon the public interest of a successful infringement suit in conjunction with the patentee's course of conduct which disqualifies him to maintain the suit, regardless of whether the particular defendant has suffered from the misuse of the patent. . . . The patentee, like those other holders of an exclusive privilege granted in the furtherance of a public policy, may not claim protection of his grant by the courts where it is being used to subvert that policy." 314 U. S. at 492-95.

Misuse of a patent in no way affects the validity of the patent itself, and once the patentee had "purged himself" he may again enforce his patent by infringement suits. E.g., *United States Gypsum Co.* v. *National Gypsum Co., supra.*[18]

Where a contract clause forms the basis for a misuse defense a mere showing that the clause is not enforced has been held insufficient to dissipate the misuse or to prevent a successful assertion of the defense. *Berlenbach* v. *Anderson & Thompson Ski Co.*, 329 F. 2d 782 (9th Cir.), cert. denied, 379 U. S. 830, 85 S. Ct. 60, 13 L. Ed. 2d 39 (1964).

Since the activities giving rise to patent misuse frequently have actual or anticipated adverse effects on competition, there is a close relationship between the patent misuse doctrine and antitrust law. "So long as the patent owner is using his patent in violation of the antitrust laws, he cannot restrain infringement of it by others." *Hartford-Empire Co.* v. *United States*, 323 U. S. 386, 415, 65 S. Ct. 373, ..., 89 L. Ed. 322, 362 (1945).[19]

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18. See *McCullough Tool Co.* v. *Well Surveys, Inc.*, 343 F. 2d 381, 407-08 (10th Cir., 1965), cert. denied, 383 U. S. 933, 86 S. Ct. 1061, 15 L. Ed. 2d 851 (1966); *Turbo Machine Co.* v. *Proctor & Schwartz, Inc.*, 241 F. Supp. 723, 729 (E. D. Pa., 1965), aff'd., 362 F. 2d 5 (3rd Cir., 1966).

19. Because of the decision we reach we need not decide between conflicting views of whether it is necessary to a successful assertion of the defense of misuse that all elements of civil or criminal

With these preliminary observations, we return to the case before us.

A. Exclusive Dealerships.

Esco products, including teeth manufactured under the '506 patent, are sold through a network of independent dealers. A policy statement distributed by Esco to its dealers contains, among other clauses, the following:

> "Dealers will not stock or sell competitive products unless prior arrangements have been made with ESCO."

Appellant urges that Esco, by requiring its dealers to sell only Esco products, is misusing the patents under which these products are manufactured.

There is no proof in this case of an absolute contractual

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liability under the antitrust laws be shown. The cases indicate no such standard of proof is required. *Morton Salt Co.* v. *G. S. Suppiger Co.*, supra, 314 U. S. at 490; *Berlenbach* v. *Anderson & Thompson Ski Co.*, supra, *Laitram Corp.* v. *King Crab, Inc.*, 245 F. Supp. 1019 (D. Alaska, 1965). Note the conclusion of the Attorney General's Committee that "from some abuses of patent policy [sufficient to justify non-enforcement of the patent] may flow consequences not drastic enough to meet antitrust prerequisites of effect on competition. In addition, many patent abuses are more effectively curbed by simply denying relief as a matter of patent policy," (Report, at 254.)

But compare the view of Kennedy, Patent and Antitrust Policy; the Search for a Unitary Theory, 35 Geo. Wash. L. Rev. 512 (1966), at 560: "Faulty reasoning . . . underlies the widely held view that extra patent restraints of no competitive significance justify the denial of injunctive relief. . . . Attempts at metaphysical distinctions between patent policy and antitrust policy violations serve no constructive purpose . . . [Defendants asserting misuse] defenses should be held to substantive standards of violation evolved under the Sherman, Clayton or Federal Trade Commission Acts."

Certainly a case of misuse not sufficient to constitute a violation of the antitrust laws requires careful synthesis of the policies represented by the patent and the antitrust laws. Kennedy, supra. Baxter, Legal Restrictions in Exploitation of the Patent Monopoly: An Economic Analysis, 76 Yale L. J. 267 (1966).

duty that Esco dealers not handle competing products.[20] There was evidence that because of the limited market for points and adapters it is neither practical nor economical for a dealer to carry more than one manufacturer's line of products. There was testimony that some Esco dealers did carry teeth made by other manufacturers (though Esco did characterize these as very minor situations which it has "chosen to overlook"). There was no evidence that Esco has refused to make "prior arrangements" with any dealer indicating a desire to stock or sell competitive products, and the district court found that Esco has not terminated any dealership for failure to comply with the policy statement.

Because no contractual condition was proved to exist there was no proof of misuse in the form of exclusive dealerships.[21]

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20. A contractual duty (even if not enforced) may be sufficient to constitute misuse. See *Berlenbach* v. *Anderson & Thompson Ski Co.*, supra. A specific agreement not to handle competitive products without prior written approval may be enough. *F. C. Russell Co.* v. *Consumers Insulation Co.*, 226 F. 2d 373 (3rd Cir., 1955).

21. In addition, the trial court found that the existence of the company policy had not substantially lessened competition or created a monopoly in any line of commerce. As to whether, in a case where a contractual condition does exist, misuse is established merely by proof of the condition, or there must be proof of effect on the relevant market, see *McCullough* v. *Kammerer Corp.*, 166 F. 2d 759 (9th Cir., 1948); *National Lockwasher Co.* v. *George K. Garrett Co., Inc.*, 137 F. 2d 255 (3rd Cir., 1943); *Waco-Porter Corp.* v. *Tubular Structures Corp.*, 220 F. Supp. 724, as modified by 222 F. Supp. 332 (S. D. Cal., 1963) [in the second opinion, the district court expressly adopted the view, rejected in the first opinion, that it was not necessary to show lessened competition to establish misuse]; *Steffen* v. *W. J. Schoenberger Co.*, 90 F. Supp. 710 (N. D. Ohio, 1950); *Park-in Theatres Inc.* v. *Paramount-Richards Theatres, Inc.*, 81 F. Supp. 466 (D. Del., 1948). Compare *Performed Line Products Co.* v. *Fanner Manufacturing Co.*, 225 F. Supp. 762 (N. D. Ohio, 1962), aff'd., 328 F. 2d 265 (6th Cir., 1964).

B. The Esco-Caterpillar License.

The Esco-Caterpillar agreement, insofar as pertinent to our purposes, may be summarized as follows: Caterpillar is granted a license "to manufacture, to have manufactured, to use and to sell" articles embodying the inventions covered by all patents contained in an incorporated schedule; this includes, in addition to the '506 patent, two other United States patents and the foreign equivalents to these. The license extends only to tooth points, adapters, pins and plugs of dimensions and designs corresponding to incorporated exhibits. The items involved are parts for Caterpillar equipment. The license is stated to be "exclusive," but Esco, and others it may choose to license, are not excluded from manufacturing the parts and selling them to Caterpillar, if Caterpillar wishes to buy them. Royalties are fixed by a formula (discussed below), but no royalties are payable on items manufactured by Esco or its subsidiaries, successors, assignees or licensees and purchased by Caterpillar.

The "exclusive" nature of the agreement may be terminated by Esco if Caterpillar's use of the patents falls below a prescribed level (see discussion below).

Provision is made for Caterpillar to extend its license to subsidiaries and licensees if Caterpillar agrees to assume liability and responsibility to Esco for the acts and omissions of the extendees pertaining to the agreement.

Under the agreement Caterpillar may manufacture the parts, or have them manufactured for it by one other than an Esco licensee or subsidiary. If it does so it pays royalties on parts so made. In practice it has not exercised this right, although it has investigated the feasibility of doing so in several instances, particularly in foreign countries. In practice Caterpillar has continued to purchase all the parts from Esco and its subsidiaries and licensees.

(Esco is bound to use its best efforts to have any licensee who may obtain from it a license agreement covering its tooth points and adapters enter into an agreement to manufacture and sell to Caterpillar the items involved. In practice Esco has sought such agreement with at least some of its licensees.) Parts thus made for Caterpillar have the Caterpillar name thereon.

The agreement contains a specific condition which we set out in the margin.[22] The agreement does not restrict the condition to items manufactured by Caterpillar. Patent monopoly is "exhausted" by the first authorized sale of the patented item, and the patent law does not protect attempts by the patentee or his licensees to control use of the product after such sale. *United States* v. *Univis Lens Co.*, 316 U. S. 241, 62 S. Ct. 1088, 86 L. Ed. 1408 (1942). See also *Motion Picture Patents Co.* v. *Universal Film Mfg. Co.*, 243 U. S. 502, 37 S. Ct. 416, 61 L. Ed. 871 (1917), overruling *Henry* v. *A. B. Dick Co.*, 224 U. S. 1, 32 S. Ct. 364, 56 L. Ed. 645 (1912). *United States* v. *Arnold, Schwinn & Co.*, 35 L. W. 4563 (U. S. June 12, 1967), holds it a per se violation of the Sherman Act for a manufacturer to restrict persons to whom an article may be traded after the manufacturer has parted with dominion over it.

> "Under the Sherman Act, it is unreasonable without more for a manufacturer to seek to restrict and confine areas or persons with which an article may be traded after the manufacturer has parted with dominion over it. *White Motor, supra*; *Dr. Miles, supra.* Such restraints are so obviously destructive of competition

22. "[P]rovided, however, that such license is further restricted to the use of licensed products and/or sale of licensed products for original installation on products or equipment manufactured by or for CATERPILLAR and sold by CATERPILLAR and by CATERPILLAR dealers throughout the world and to use as replacement parts sold by CATERPILLAR and by CATERPILLAR dealers throughout the world for such products and equipment."

> that their mere existence is enough. If the manufacturer parts with dominion over his product or transfers risk of loss to another, he may not reserve control over its destiny or the conditions of its resale. To permit this would sanction franchising and confinement of distribution as the ordinary instead of the unusual method which may be permissible in an appropriate and impelling competitive setting, since most merchandise is distributed by means of purchase and sale. (35 LW 4566)
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> "Once the manufacturer has parted with title and risk, he has parted with dominion over the product, and his effort thereafter to restrict territory or persons to whom the product may be transferred—whether by explicit agreement or by silent combination or understanding with his vendee—is a per se violation of § 1 of the Sherman Act." (35 LW 4567)

Under *Hartford-Empire, supra,* this per se violation of the antitrust laws bars Esco from enforcing its patent in this case.

There are equitable considerations present running both ways. It is not clear that the restriction limiting resale of parts to Caterpillar dealers was required by Esco for its purposes or even desired by it. Schwinn was pursuing its own interests. There was some evidence that Esco actually does not know, though it assumes it, whether Caterpillar is making resales to its dealers only, and there is no evidence of Esco taking any action to enforce the condition or even caring whether it is enforced. The Supreme Court found Schwinn "firm and resolute" in insisting upon observance of customer (and territorial) restrictions. Schwinn combined customer restrictions with territorial restrictions; there are no territorial restrictions in the case before us. Schwinn confined access to its product to dealers it selected; the agreement here confines access to dealers Caterpillar selects. Only a small fraction of

Schwinn's sales were involved, while Caterpillar is the giant of the equipment industry and is Esco's best customer. As we understand the interplay of *Schwinn* and *Hartford-Empire,* and the underlying patent policy, there is no inquiry into purity of heart vs. bad motive, or market impact, or matters of what may seem to be essential fairness—a per se violation of the Sherman Act is deemed such a monopolistic action that the patentee is barred from enforcing the limited and special monopoly given him by the patent laws.

C. Attempt to Extend Royalty Payments Beyond Life of Patent.

The agreement with Caterpillar does not attempt to extend royalty payments on the '506 and other patents beyond the life of those patents.

In *Brulotte* v. *Thys Co.*, 379 U. S. 29, 85 S. Ct. 176, 13 L. Ed. 2d 99 (1964), the Supreme Court considered a suit for royalties on a use license covering twelve patents, all but one of which expired before the expiration of the agreement (17 years after the sale). Only seven were incorporated in the purchased article (a portable hop picking machine) which the license permitted the purchaser to use; all of these expired before the termination of the agreement. The royalty payable under the agreement was a $500 minimum per season or $3.33⅓ per 200 pounds of hops harvested, whichever was greater. The Court held that no royalties could be collected which accrued after expiration of the last patent incorporated into the machine, as "a projection of the patent monopoly after the patent expires is not enforceable." Significantly, the Court voiced no objection to the fact that the royalty rate did not vary when some, but less than all, of the patents incorporated into the device expired. Compare *American*

Securit Co. v. *Shatterproof Glass Corp.*, 268 F. 2d 769 (3rd Cir.), cert. denied, 361 U. S. 902, 80 S. Ct. 210, 4 L. Ed. 2d 157 (1959); *Ar-Tic Systems, Inc.* v. *Dairy Queen, Inc.*, 302 F. 2d 496 (3rd Cir., 1962), and *Rocform Corp.* v. *Acitelli-Standard Concrete Wall, Inc.*, 367 F. 2d 678 (6th Cir., 1966); *Technograph Printed Circuits, Ltd.* v. *Bendix Aviation Corp.*, 218 F. Supp. 1, 48-49 (D. Md., 1963), aff'd, 327 F. 2d 497 (4th Cir., 1964).[23]

We need not further discuss the case law because Hensley's contention is based on a misconstruction of the agreement. In addition to the '506 patent the agreement covers two other United States Letter Patents and the foreign equivalents of all three. Patent No. 3,126,654 covers the pin and plug used in connection with the wear point and adapter ordered by the '506 patent. The agreement, as related to Patent No. 3,079,710, also covers wear points for use on "rippers", devices used on Caterpillar's front end loaders when the loading apparatus has been removed. The royalty provisions provide for royalties "for each tooth point, adapter, pin or plug manufactured by or for and sold by Caterpillar during the life of this Agreement and embodying an invention disclosed and claimed in a Licensed Patent." For each tooth point, pin or plug, the royalty is set at five per cent of the net price of the item; for each adapter, the royalty is seven and one-half per cent of the aggregate net prices for the tooth point, pin and plug used on the adapter. The agreement specifically provides that "no royalties shall be . . . paid by Caterpillar on points, adapter, pins or plugs manufactured and sold in any country or countries in which Esco has neither an unexpired patent nor a pending application for a patent disclosing and claiming an invention incorporated in the point, adapter, pin or plug."

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23. See generally, Comment, Post Expiration Royalty Payments and Mandatory Package Licensing as Patent Misuses, 11 *Vill. L. Rev.* 382 (1966); Note, 1965 *Duke L. J.* 836.

No single item which Caterpillar is licensed to manufacture will embody more than one of the United States Patents covered by the agreement. The district court made a specific finding that the agreement imposed no liability on Caterpillar to pay royalties on articles covered under an expired Esco patent. This agreement is one step further from illegal extension of royalty payments than the situation in *Brulotte* v. *Thys, supra,* where the court refused to disapprove a requirement that royalties on an item embodying the inventions of more than one patent be maintained when some but less than all the patents had expired.[24]

D. Termination of Exclusivity.

Hensley theorizes that par. 11 of the agreement,[25] dealing with termination of the so-called "exclusivity" feature of the license, violates Sections 1 and 2 of the Sherman Act as a contract in restraint of trade and an attempt by Esco

24. Cf. *Automatic Radio Mfg. Co.* v. *Hazeltine Research, Inc.*, 339 U. S. 827, 70 S. Ct. 894, 94 L. Ed. 1312 (1950). Nor can there be any question of coercive package licensing. See *United States* v. *Paramount Pictures, Inc.*, 334 U. S. 131, 156-59, 68 S. Ct. 915, 92 L. Ed. 1260, 1292 (1948); *American Securit Co.* v. *Shatterproof Glass Corp.*, 268 F. 2d 769 (3rd Cir.), cert. denied, 361 U. S. 902, 80 S. Ct. 210, 4 L. Ed. 2d 157 (1959); Note, 73 Harv. L. Rev. 1628 (1960). There is no indication here that Caterpillar was in any way coerced into unwillingly accepting any of the patents as a condition of being licensed to practice the others; in fact, the evidence suggests inclusion of all was necessary for the accomplishment of Caterpillar's objectives. See *McCullough Tool Co.* v. *Well Surveys, Inc.*, supra.

25. "The exclusive license herein granted shall cease to be exclusive and shall become nonexclusive as to a tooth point, adapter, pin and plug of the design and dimensions illustrated in any of Exhibits A, B, C, D, E and F and any Exhibits added hereto by amendment, if CATERPILLAR shall totally discontinue both the use and sale of such tooth point, adapter, pin and plug and if following such discontinuance ESCO shall give CATERPILLAR ninety (90) days' prior written notice of its election to make the license herein granted a nonexclusive one for such tooth point, adapter, pin and plug. In addition, the exclusive license herein

to monopolize commerce in the replacement market for wear points and adapters for the types of Caterpillar-made equipment on which they are usable. Its argument runs as follows. Caterpillar must continue purchasing or using the licensed products exclusively or face competition from the Esco dealers in the replacement market for wear points and adapters for Caterpillar equipment. Caterpillar is deterred from changing to non-patented products or products outside the license agreement, and Esco is insured against competition from such products being used in lieu of the Esco conical teeth. The agreement is, in effect, one between two manufacturers not to compete with each other.

The agreement does not require as a consideration for securing the "exclusive" license that Caterpillar use the licensed products to the exclusion of all others. At all times Caterpillar may offer competing products as replacement parts even to the total exclusion of the licensed products, so long as there has been no previous "substantial discontinuance" of use on new equipment. There are no agreements not to use the products of competitors of Esco. Caterpillar has the full right to have the items

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granted shall cease to be exclusive and shall become nonexclusive as to a tooth point, adapter, pin and plug of the design and dimensions illustrated in any of Exhibits A, B, C, D, E and F and any Exhibits added hereto by amendment, if at any time after December 31, 1966, CATERPILLAR (including its extendees who for this purpose shall be considered in the aggregate with CATERPILLAR) shall substantially discontinue the use of such tooth point, adapter, pin and plug on original equipment manufactured by or for CATERPILLAR, and if in any calendar year after such discontinuance the aggregate sales (based on net price as defined in paragraph 3 hereof) of such tooth point, adapter, pin and plug amounts to less than forty per cent (40%) of one third of the aggregate sales (based on net price as defined in paragraph 3 hereof) of such tooth point, adapter, pin and plug in the three (3) calendar years immediately preceding such discontinuance and ESCO subsequently gives CATERPILLAR written notice of its election to make the license herein granted a nonexclusive one for such tooth point, adapter, pin and plug."

manufactured for it by others, who are or would be Esco's manufacturing competitors. It was shown that Caterpillar is a giant of the industry that manufactures equipment employing the conical teeth, but its status as a manufacturer of teeth (and other parts)—new or replacement—is another matter. Also the agreement insures that Caterpillar may not, through non-use, deprive the patentee and the public of benefits of the patent as applied to Caterpillar parts. If Caterpillar limits the practice of the invention as to Caterpillar parts to below the limits prescribed then Esco is free to practice it. There are no price fixing agreements, no division of geographical markets, no effort to extend the grant of the patent to unpatented devices.

Hensley does not suggest that the termination of exclusivity clause is within the narrow range of monopolistic practices denoted as per se violations of the Sherman Act.

Insofar as par. 11 is concerned the district court was not plainly erroneous in finding there was no misuse.

V. Counterclaims.

The district court held it had no jurisdiction of validity and infringement of Esco's patents 3,026,947 and 3,079,710, which Hensley had sought to raise by counterclaims, since Esco had not charged Hensley with infringement thereof. Hensley asserts this as error but cites no authority or explanation for its contention. The right of a party to seek a declaratory judgment is subject to the "same transaction or occurrence" requirement of Fed. Rule Civ. Proc. 13(a) and the "same subject matter" test of Rule 13(b), relating to counterclaims. The district court correctly found it had no jurisdiction to litigate validity and infringement of these two patents.

The findings of the district court that the patent is valid and that Hensley has infringed the patent are AFFIRMED. The finding that Esco has not misused the patent is REVERSED. REMANDED to the district court with direction to dismiss the case.